PatternMaker Version 7.5
User's Manual
Complete version

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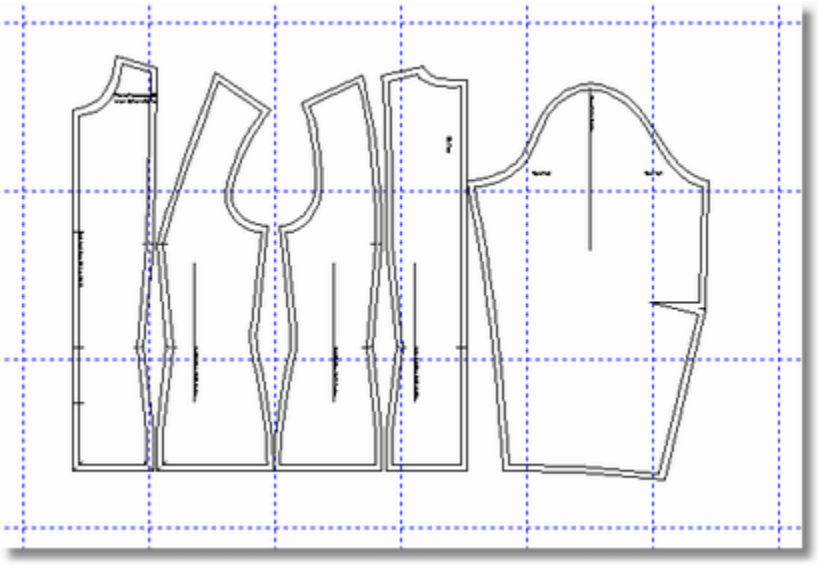

PatternMaker Version 7.5

User's Manual

oktober 2014

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Revised: oktober 2014.

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Special thanks to:

The wonderful members of PMUG and customers we've talked to at shows who gave suggestions for new features and generously gave their time to help with testing.

Note about manual contents:

This manual includes documentation of features offered in every version of PatternMaker, from the Basic Viewer through the Marker Studio.

Please note that you may not see exactly what these pictures show, and you may not have access to all the described features and commands.

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Introduction

1.1 Welcome to PatternMaker!

PatternMaker is a computer-aided design (CAD) program designed especially for clothing pattern design. PatternMaker makes it easy and fast to make clothing patterns, and lets you automatically resize your patterns. In short, PatternMaker lets you do everything you used to do with scissors, pencil, and paper, but much faster. This program has many features that are different from any other program, but you can learn to use it quickly with this manual.

All PatternMaker programs include:

- *Custom patterns* Sizes don't matter! Use PatternMaker's collections of pre-designed garments to create basic patterns from your own measurements. For pants, for example, you can tell PatternMaker your waist, hip, and leg length measurements, and the pattern will be mathematically drawn to fit you!
- *Printing* PatternMaker lets you print your patterns on any printer that is supported by Windows, including desktop printers, plotters, and print-to-fax programs.

Deluxe Editor adds:

- *Editing* Use the pre-designed patterns as a starting point for your own unique designs. Practice pattern alterations on a pattern that you know already fits you.
- *Measurement tables* Save your measurements in a file, so you don't have to type them in for every pattern. Save measurement tables for your family and friends, too!

Professional Studio adds:

- *Drawing* Draw new patterns using the same procedures you use now to draw patterns on paper. Change, edit or save existing patterns.
- *Tools* Take advantage of advanced drawing tools such as facings, pleats, and darts.
- *Layers* Use layers to help organize objects in your drawing.
- *Customization* Set up PatternMaker to look and work the way you want.

Advanced Features:

PatternMaker Grading Studio and Marker Studio are for the professional pattern cutter or designer, and have many powerful features for the serious user. These include:

- *Digitizers* Use a digitizer tablet to "trace" patterns from paper originals or books. If the original was not full-scale, you can automatically expand it to life-size.
- *Grading* Grade your pattern according to your own grading rule. Make your own pattern in Size 10, for example, and PatternMaker can convert the pattern to sizes 8, 12, and 14. Save a grading rule simply, easily, and quickly, and apply that grading rule to any other pattern.
- *Special symbol libraries* These contain commonly-used symbols such as buttonholes, grainlines, arrows, etc., which you can insert into your pattern. One basic symbol library is provided with PatternMaker. In addition, if you have Grading Studio or Marker Studio, creating your own libraries is as easy as saving a file.
- *Marker features* PatternMaker Marker Studio lets you arrange pattern pieces and print production markers. Special features let you pack the pieces together for maximum material efficiency, set cut ratios, and print reports showing material used and other information.

IMPORTANT:

The Help is written for all versions of PatternMaker. It is possible in the Help that we write and explain about features which are not available in your version.
In the chapter LEARNING THE BASICS In Icon Overview you can exactly see which version contains which features.

In the PDF manual of your program you will only see the available tools and commands of your version.

1.2 What's new in Version 7.5

We've incorporated many user ideas, and added a few neat things we thought up on our own:

- ***Change group added to change command***
  see change group
- ***keeps track of selected styles and measurements***
  they are stored in the area of the launchpad browser when you have saved the file
- ***Create measurement tables in the basic version***
  store measurement tables just as in other version
- ***File name auto completion***
  quickly find files
- ***project editor now in a separate program***
  create macro projects in a better environment
- ***Grading arrow***
  arrow names and visibility options improved
- ***better stability***
  launch pad interface is more stable
- ***Macro Generator communication***
  editing MacroGen files in PatternMaker is more stable
- ***Improved language***
  the macro parser has been redone from scratch
- ***added a Help Manuals command***
  in Help / Manuals you can find all all the documentation about PatternMaker. You will find here also the PDF manuals of every version of PatternMaker.

For an extensive list of all changed and added features see the "What's new in version 7.5" in the Welcome screen of PatternMaker.

1.3 Manual conventions

As you read through the User's Manual, or consult the Help file, you will notice that some words or phrases appear in different typefaces:

Keys to press on your keyboard

Represented by capital letters, enclosed in brackets:

example:	<ESC>
means:	Press this key

example:	<CTRL>+<F3>
means:	Press the first key and hold it while you press the second key, then release both

When the computer is telling you something

This font is used to represent the instructions that appear on the command line:

example: `Rotate around what point?`

Things to select from the menus

Menu items appear in quotes, and the name of the menu appears in bold type:

example: Click "Save" on the **File** menu

Mouse clicks

example: **LM** or **RM**
means: click the left mouse button or click the right mouse button

1.4 Time out for basics

WINDOWS BASICS

If you are brand new to computers, take some time to go over this section. Make sure you are familiar with the following terms, since they will be used frequently as you read through the manual.

Click

Move the mouse around until the point of the mouse cursor is pointing where the directions instruct you. Press the left button once and then release it. If the directions say "click," it always means one click. If they mean two clicks, they will say "double-click." Also, when this manual simply says "click," it means with the left button (**LM**). In PatternMaker, as in many other programs, "right-clicking (**RM)**," has special functions.

Double-click

Move the mouse around until the point of the mouse cursor is pointing where the directions instruct you. Press and release the left button twice, quickly. Be careful not to move the mouse as you do this. If nothing seems to happen, try clicking faster, and be sure the mouse does not move.

Icons

These are small pictures that represent actions. They are shortcuts to commonly used program commands. Click once on an icon to execute its command.

Menu bar

The row of words across the top of the PatternMaker window. This is where you find all the commands of the program. When you click on one of the menu items, you get a "drop-down menu". These menus are associated with the menu item that they drop down from. For example, the menu that appears when you click the word "File" is called the **File** menu. The "Save" command is an item on the **File** menu.

If you need more help with any of these, you can find full details in your Windows manual or Help section.

PATTERNMAKER BASICS

Object

Something that is drawn in PatternMaker. There are four types of objects, but the two main types you'll be concerned with are Polygons and Text. A Polygon object is "a shape" -- circles, lines, octagons... and collars, sleeves, pockets, etc. A Text object is a descriptive label that you can add to any part of a drawing.

Vertex (vertices - pl.)

The beginning/end of a line segment, or the place where two line segments come together. For example, a triangle

(a Polygon object!) has three vertices, one at each corner. Sometimes we'll also use the word *point* to mean *vertex*, simply because it's a more familiar word. (The menu that contains commands relating to vertices is even called the **Points** menu.) At other times, the word *point* may be used to mean *spot* or *location*, as in, "...the point where the two lines intersect." The meaning should be clear from the context.

Points vs. Objects

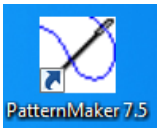
Points and objects are related, obviously, since objects are made up of points, but in PatternMaker you interact with them entirely separately. Commands that affect entire objects (ERASE, CUT, MOVE, etc) are found on the **Edit** menu; commands that affect individual points (MOVE VERTEX, DELETE VERTEX, etc.) are found on the **Points** menu.

The Command Line

At the bottom of the PatternMaker window is a blue area called the Command Line. This is where PatternMaker tells you what it's doing, and what it expects you to do next (select something, finish doing something, etc.). The command area shows the last three actions, with the most recent item at the bottom.

1.5 Starting the program

When you install PatternMaker, it creates an icon on your desktop (and also on the Start/Programs menu). This icon looks like a needle and thread:



Let's go! Double-click on the icon to launch the program. The program takes a moment to load. If you try to click on something and nothing happens, or if you see a (*Not Responding)* message in the title bar of the program window, just wait a few more seconds and then try again.

Learning the Basics

2.1 Program overview

Okay, you've got PatternMaker -- now what? Here's a strategy on getting started:

- Start first with reading the Quick Start manual that you can open through the Start window of PatternMaker. You will find here in short the most important things to know about PatternMaker.
- Read through the "Program Overview" and "LaunchPad Interface" sections.
- Read the section on "Patterns and Printing." Have someone help you take your measurements (follow the directions here), and then try the sample pants or the fitting bodice to check that your measurements were taken properly (follow directions here).
- Read the rest of Chapter 2 ("Getting around in the program")
- Read the sections on drawing and editing. Don't get bogged down; if there's something you don't understand at once.
- Read the remaining chapters of the manual. Use the "Reference: Menu Commands" sections to look up any commands you don't understand.
- Make some patterns on your own. Remember, this is what you bought PatternMaker for! The fastest way to learn is by doing -- this is as true for PatternMaker as for anything else. You'll find that you don't need to know every single command before you can start getting to work.
- Read the rest of the manual systematically. Try every command at least once.

Use the manual and the Help system together to help you learn PatternMaker. You can access context-sensitive Help by typing <?> at any time during a command.

The first sections of the manual explain the basic concepts. The "Reference" section gives the details of how each command works.

Once you learn how to do a few commands, you can start using PatternMaker to make your own patterns. As you get comfortable with the program and develop your own techniques, keep referring back to the manual and you will keep learning new things. If you take an organized approach to learning this program, you will be making patterns in a short time!

Getting help

There are several avenues available to you if you need help.

1. First, check the Help file. It has been expanded to make it easier to find what you need. You can access the Help file from the Help menu, or by typing ?
2. Next, check the Index of the User's Manual, and the Index of the Tutorial. You may be able to find a reference to something you didn't notice in the Help file.
3. If it's a piece of terminology that's puzzling you, check the Glossary.
4. Finally, you can contact technical support by e-mail, at support@patternmakerusa.com. Also consider joining the PatternMaker User's Group e-mail discussion list. Check the PatternMaker web site for instructions on how to join:

   www.patternmakerusa.com

   You can use the link in the "About" box (located on the Help menu) to automatically launch your browser and go directly to our site.
5. As long as you're there, check the online Knowledge Base for an answer to your question. We've posted answers to many frequently asked questions, and you may find what you need in that reference.

Folders and file organization

Program Files
By default, PatternMaker expects to find all necessary files in the "C:\Program Files\PatternMaker Software\PatternMaker 7_5" folder.

User Files
When you open the program for the first time, a special folder is created. This is located at "My Documents\PatternMaker\Personal Files." Under this folder are several sub-folders, for personal measurement tables, saved patterns, grading tables, and your PatternMaker configuration files.

If your computer has more than one user profile, each profile will have its own set of user folders.

Shared Files
Files such as the garment collections, master measurement templates, and library files are shared among all users. A folder for each designer is created under "Program Files\PatternMaker Software\Shared\Designers", and each garment collection is installed in a sub-folder under its designer. You can also choose to save pattern files and grading tables in the shared location.
Specific folders for each of these file types are located under the "Program Files\PatternMaker Software\Shared" folder. This allows people to use the files when installed on a network.

Note: When you want to use one of the programs Project Editor, Collection Creator or MacroGen 4_5 files like the .mac file or measurement tables have to be saved in a specific folder. Read more about this in the Help of the specific program.

See also:

Show shared files

LaunchPad vs Windows dialogs

Measurement units

One of the first decisions you'll make when you start PatternMaker is whether you want to work in inches or centimeters. (Depending on which version of PM you're using, it may have asked you this question during setup.)

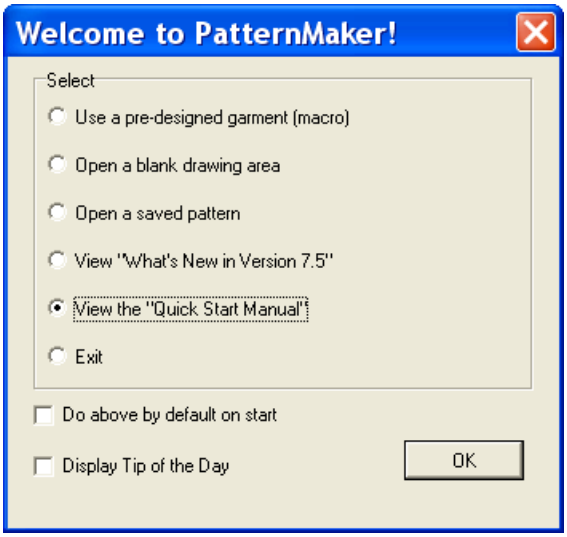
Your choice of measurement units will affect the following things:

- pre-designed garments: the garments will check to see which units you selected, and the default measurements will be displayed to you in that format. You will enter your own measurements in that format.
- seam allowances: enter your desired seam allowance using your chosen measurements
- grid: the default size for the alignment grid is one "unit" -- either 1 inch or 1cm.
- Dim: determines the size of the number labels on Dimension objects

What's on the screen

Start Form

The Start form helps you easily select how you want to use PatternMaker when you open the program.



- Use a pre-designed garment (macro): Select a pattern (**.MAC** file) from a garment collection you have installed (see Open a pre-designed garment)
- Open to a blank drawing area: Begin drawing something from scratch
- Open a saved pattern: Open a pattern (**.PAT** file) you've created from scratch, or saved after running a macro
- Read the "What's New in Version 7.5" topic:
- Read the "Quick Start Manual" topic: Gives you some basic step-by-step instructions the most important functions in PatternMaker. It takes you through the steps of creating a measurement table, starting the macro, selecting garment options, printing the pattern and some important commands.
- Exit: Closes PatternMaker

If you check the "Do above by default on start" box, the program will always perform the selected option without displaying the form. If the form has been turned off in this way, you can turn it back on by selecting the option on the "Configure" or "Configure Defaults" form found on the **Settings** menu.

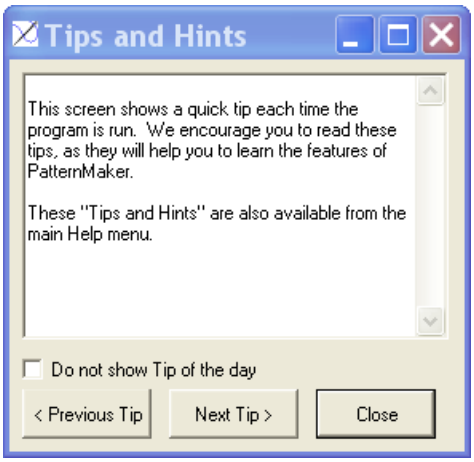
If you check the "Display Tip of the Day" box a daily tip will be shown about working with PatternMaker.

See also:

Types of files

Tip of the Day

The **Tip of the Day** introduces you to features of Version 7.5, and may help you become familiar with other ways of doing things that you never thought of before.


Tips and Hints
This screen shows a quick tip each time the program is run. We encourage you to read these tips, as they will help you to learn the features of PatternMaker.
These "Tips and Hints" are also available from the main Help menu.
Do not show Tip of the day
< Previous Tip
Next Tip >
Close

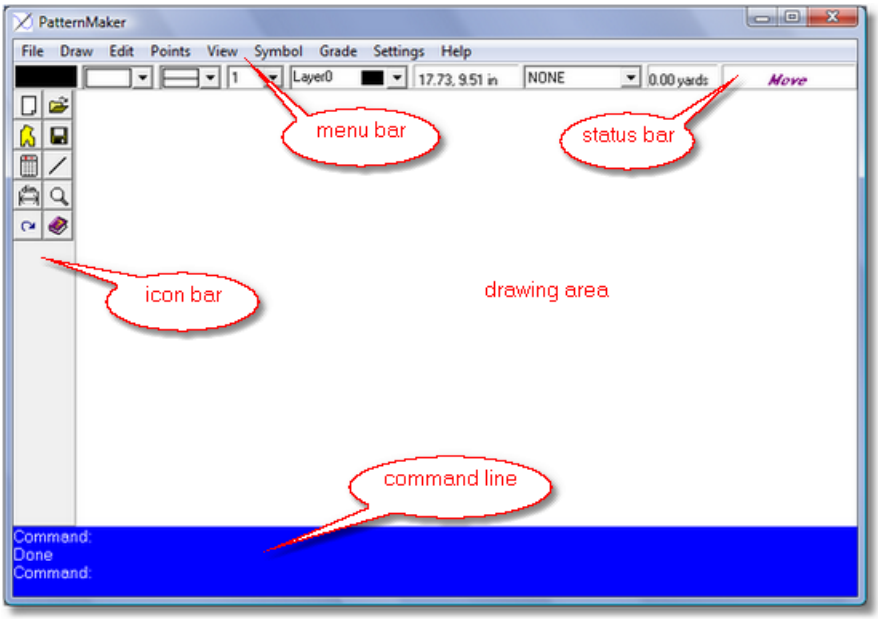
The Tip of the Day box appears immediately after the Start Form, before you access the drawing area. If you don't want to see the Tip of the Day, clear the checkbox on the Start form or check the box "Do not show Tip of the Day"in this form..

You can also open the Tips box from the PatternMaker **Help** menu.

Parts of the screen

When you start PatternMaker, what you see is the main drawing screen(black background or white). The standard Windows components -- the mouse, the drop-down menus, and the dialog boxes that appear from time to time -- work the same way they do with any other Windows programs.

Let's stop and see what we're looking at:



The **drawing area** contains all the objects in your pattern, whether you draw them yourself or use one of the pre-

designed garments. You can think of the drawing area as the viewfinder on a camera; it shows a limited section of an area that stretches out in all directions. You can zoom out, zoom in, or pan to different areas of the drawing using the arrow and page up/page down keys. We'll get to those commands in a few minutes.

Three grids are available to you as you work:

- alignment grid (dots), to help in positioning objects. See Measurement Units
- page grid (blue dashed line), to show how pattern pieces will be printed. See Page Grid
- yardage grid (red dashed line), to help you estimate fabric usage and create a pattern layout. See Yardage Grid

The drawing area is white by default, but it can be changed to black if you prefer. See Custom Settings: Screen Color for details.

The **command line** (or **prompt line**) is where PatternMaker gives you messages and asks you questions. The most recent prompt appears at the bottom. **It is very important to read these prompts.** If the computer does something that you don't expect, it's usually because the command you think you're running is not the command the program thinks you're running. Reading the prompt line and the status bar will let you know what the program is trying to do.

Doubleclicking at the Command line will move the line to the top or bottom of the screen. Moving the command line to the top will make it better readable.

Most inputs you type into the program (such as coordinates) will also appear on the command line. (However, for certain commands your inputs will go into a dialog box instead.)

When the program is ready for you to choose a new command – a drawing tool, editing function, etc. – it will display the command prompt, which looks like this:

```
Command:
```

If you don't see this, it means you are still in the middle of another command.

The **menu bar** is where you select a command. These menus work just like menus in any other Windows program, with shortcut keys and some sub-menus.

The **icon bar** provides shortcuts to some frequently-used commands. The icons will change depending on what step of a command you are in. (For example, icons for editing commands do not appear if you do not have any objects on the screen to edit.) Right-click on a button to get help about that command.

The **status bar** gives you information about the current drawing conditions -- drawing color, layer, line style, mouse coordinates, etc -- as well as the current (or most recent) command.

Note: you can change the width of the several fields in the status bar by moving your cursor over the side lines of a box. When you see the divider move it to the right or left, just the way you want it. It is possible to see the whole layer name by redesigning your status bar.

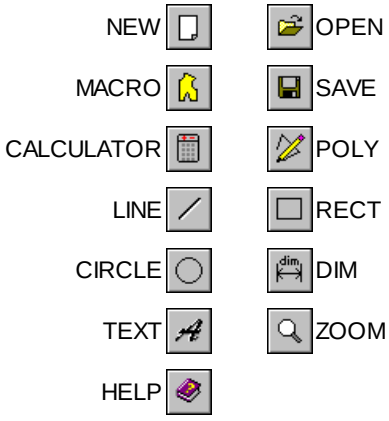
List of Icons

This is the arrangement of icons when you install PatternMaker. Most commands have an icon available, as you can see pictured on the menus, but not all of them are set to be visible by default.

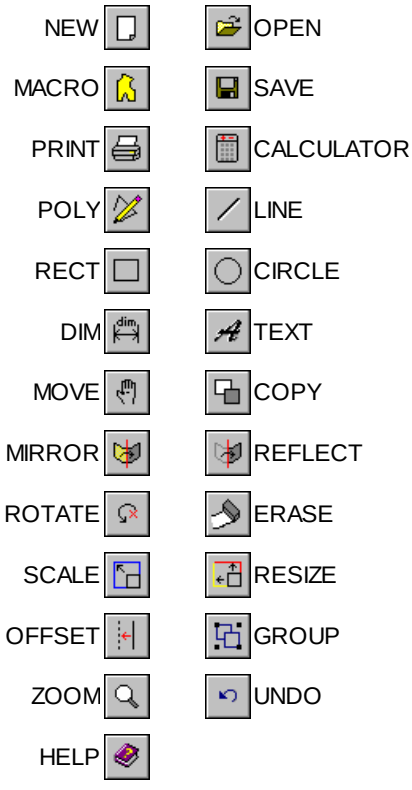
You can change the visible icons on the *Icon Bar* tab of the Configure form (found on the **Settings** menu).

Professional, Grading or Marker Studio

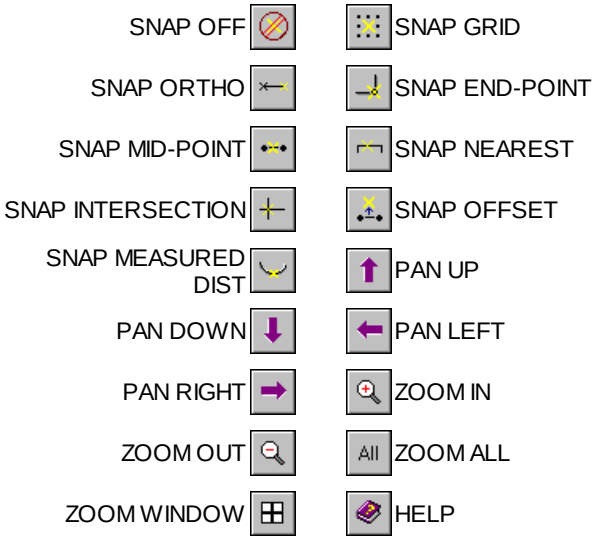
When you open the program:



When you have a drawing on the screen:



During a command:

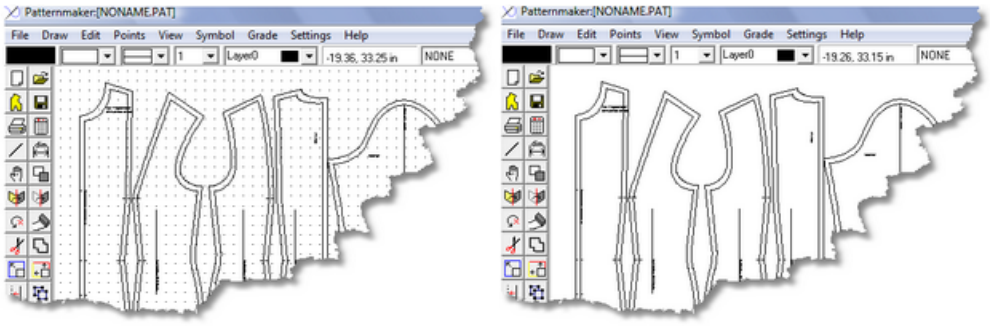


See also:

Configure: Icon Bar

Alignment grid

The alignment grid can help you position points and objects, and gives you an idea of an object's size. The default spacing of the grid is one "unit" (either one inch or one centimeter, depending on your settings), but you can change the grid spacing to anything you want.


Patternmaker:[NONAME.PAT]
File Draw Edit Points View Symbol Grade Settings Help
Patternmaker:[NONAME.PAT]
File Draw Edit Points View Symbol Grade Settings Help

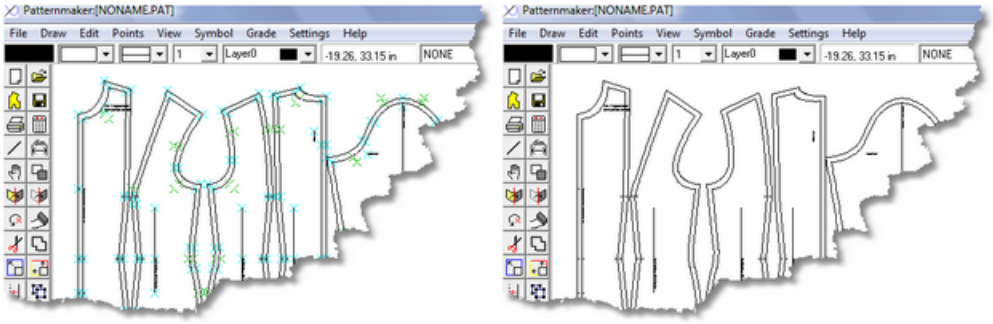
You can turn this grid off and on with the <F4> shortcut key, and you can change your Configuration settings to determine whether the grid is on or off by default when you open the program.

See also:

TOGGLE GRID command

Showing/hiding points

Every object you draw is made up of points. A point is placed automatically where a line segment begins, ends, changes direction, or curves.
Editing a pattern, or drawing one of your own, is accomplished by moving points around or adding new ones. In order to move points or perform other actions, you often need to see exactly where the points are in your drawing, since they do not necessarily fall on a line.


Patternmaker:[NONAME.PAT]
File Draw Edit Points View Symbol Grade Settings Help
Patternmaker:[NONAME.PAT]
File Draw Edit Points View Symbol Grade Settings Help

Line points appear in **blue/cyan**, and corner control points appear in **green**.

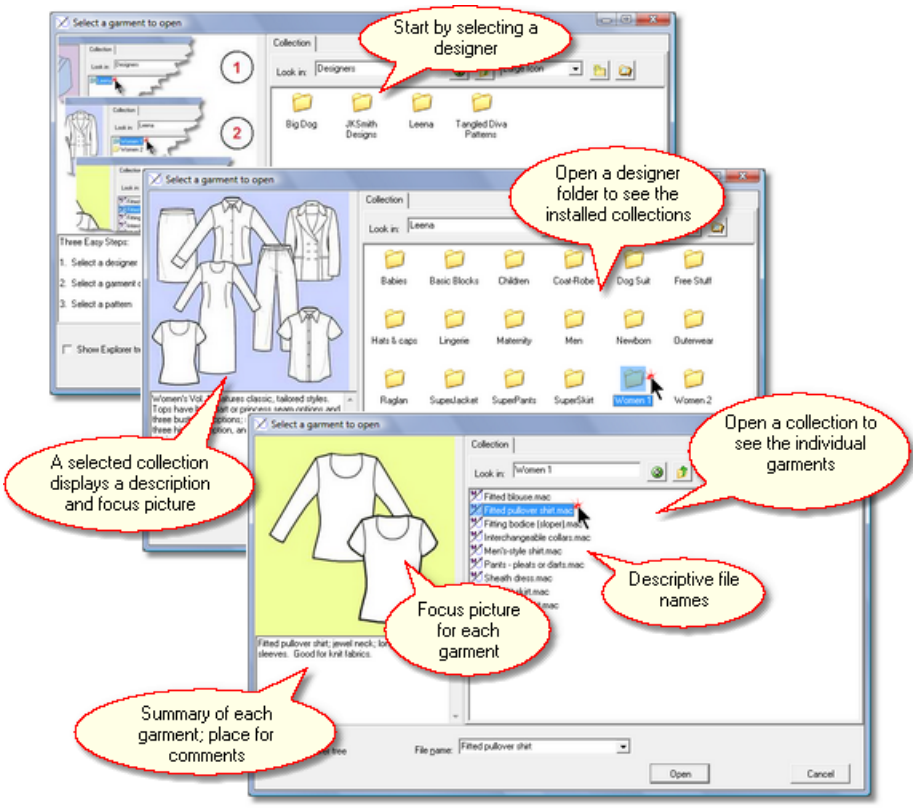
You can turn the points **off and on** with the **<F5>** shortcut key, and you can change your Configuration settings to determine whether the points are turned on or off by default when you open the program.

See also:

SHOW VERTEX command

2.2 LaunchPad Interface

The LaunchPad interface makes it easy to find and use your patterns and saved files, without worrying about "losing them" somewhere on your computer. The designers and garment collections are represented by folders. Each garment collection and the individual patterns have illustrations, to help you choose a project. And, style options within each pattern are illustrated as well.


Start by selecting a designer
Open a designer folder to see the installed collections
Open a collection to see the individual garments
A selected collection displays a description and focus picture
Descriptive file names
Focus picture for each garment
Summary of each garment; place for comments

Each of the pre-designed garments comes with a descriptive summary, and you can also write a comment about patterns you save, to help you identify them later. When you save a pattern created from the pre-designed garments, this space will also save notes about which style options you chose and the measurements that were used.

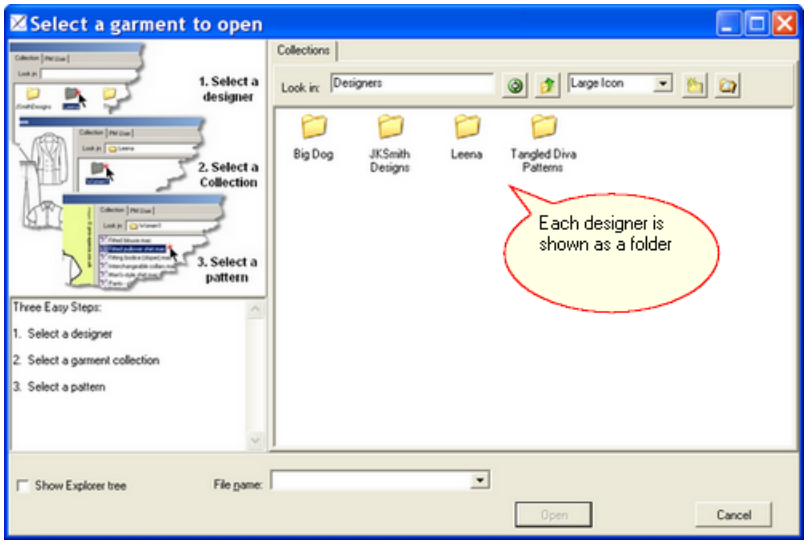
Read more...

Finding and opening a pattern
Saving a pattern

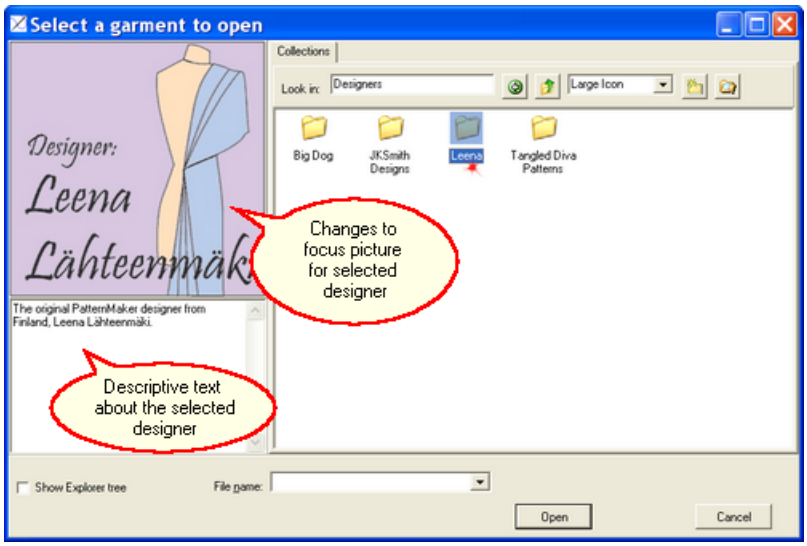
The LaunchPad interface is active by default, but if you're an old hand at PatternMaker, and want to work with the original file interface, that option is still available. Select "Configure Defaults" from the **Configure** menu, and then click the "Advanced..." button. Look in the column of options to the right side of the form, and put a mark in the "Use Windows Browsers" checkbox.

Select a designer

The LaunchPad opens to the Designer's list. A folder represents each designer whose collection(s) you have installed.



Double-click on the designer you want, or click once and then click the "Open" button.



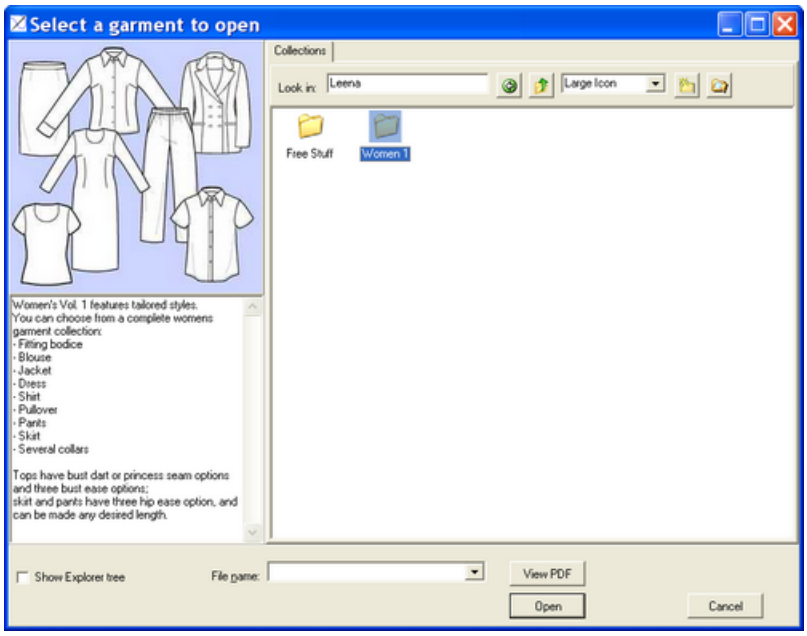
Next: Select a garment collection

See also:

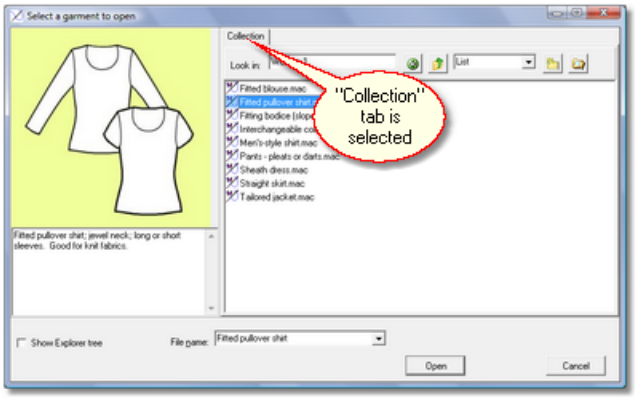
LaunchPad view options

Select a garment collection

Each garment collection is represented by a folder. Click once on a folder to see the description and focus picture. Open the folder to see the individual garments in the collection.



Each garment in a collection has a description and a focus picture to help you select the one you want.


"Collection" tab is selected
Fitted pullover shirt; jewel neck; long or short sleeves. Good for knit fabrics.
Show Explorer tree
File name: Fitted pullover shirt
Open
Cancel

Next: Open a file

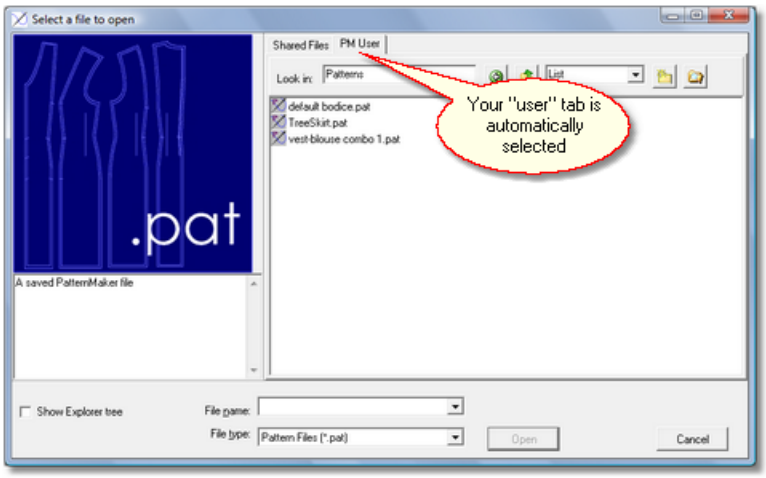
See also:

LaunchPad view options

Open a file

The LaunchPad helps you find patterns from the garment collections as well as saved patterns that you've made.

Click the Open file icon.
The folder Patterns where all the saved pattern files are stored opens.



Select the file you want, then click the "Open" button.

Saved pattern files have a standardized focus picture, and display any comments you wrote when you saved the file.

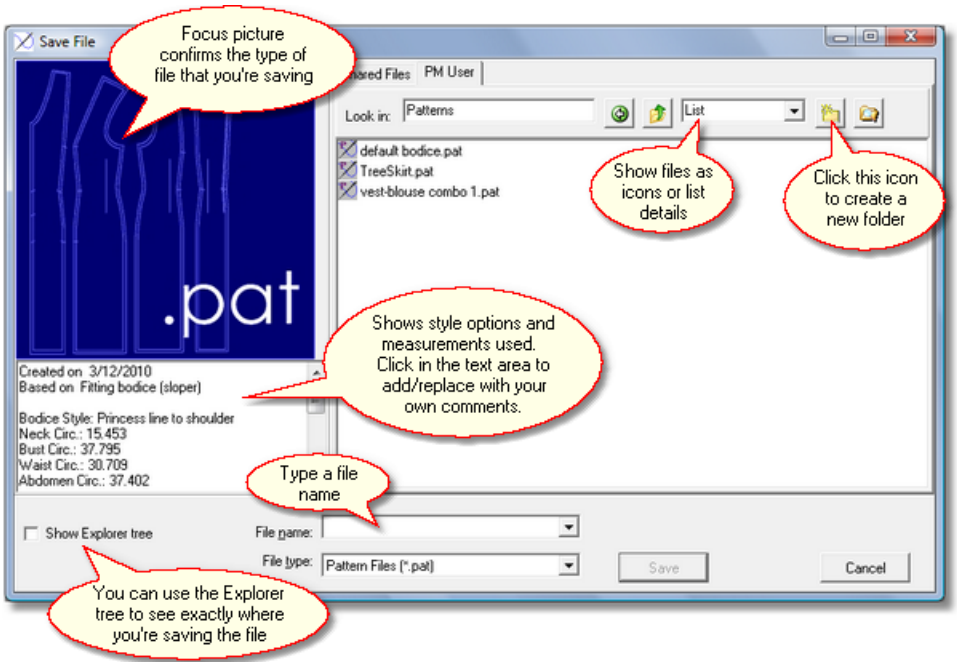
See also:

- LaunchPad view options
- Folders and file organization
- OPEN command

Save a file

When you want to save a pattern file, you'll use the LaunchPad "Save" window. It is very similar to the other LaunchPad windows: space for a file name and description, a focus picture, and the list of files and folders.

If you started from one of the pre-designed garments, the Notes area will list the style options you chose and the measurements that were used.


Save File
Focus picture confirms the type of file that you're saving
PM User
Look in:
Patterns
List
default bodice.pat
TreeSkirt.pat
vest-blouse combo 1.pat
Show files as icons or list details
Click this icon to create a new folder
.pat
Shows style options and measurements used. Click in the text area to add/replace with your own comments.
Created on 3/12/2010
Based on Fitting bodice (sloper)
Bodice Style: Princess line to shoulder
Neck Circ.: 15.453
Bust Circ.: 37.795
Waist Circ.: 30.709
Abdomen Circ.: 37.402
Type a file name
Show Explorer tree
File name:
File type:
Pattern Files (*.pat)
Save
Cancel
You can use the Explorer tree to see exactly where you're saving the file

If you're really feeling adventurous, you can create your own focus picture to go along with your new file. The requirements are:

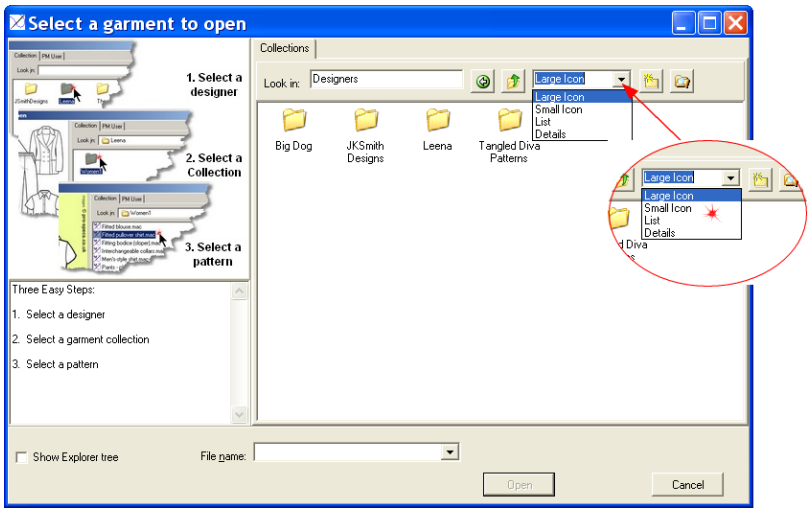
- the image must be in .jpg format. This could be a line drawing, or even a photo of the finished garment.
- maximum dimensions are 250x250 pixels
- the image must have exactly the same name as the pattern, other than the .jpg file extension
- it must be located in the same folder as the **.pat** file

See also:

LaunchPad view options
Folders and file organization
SAVE command

LaunchPad view options

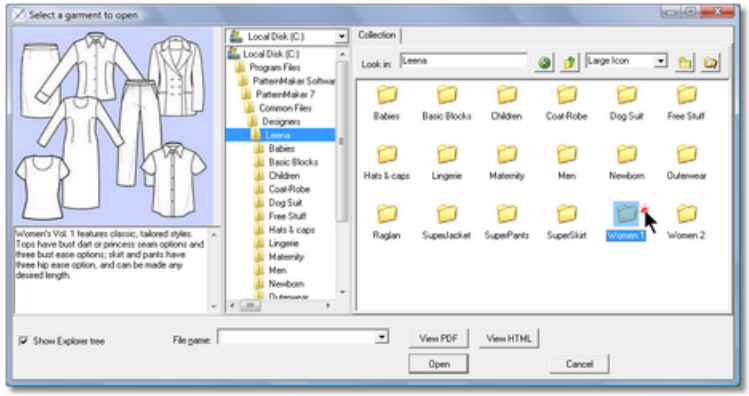
The LaunchPad give you a lot of flexibility in how you locate and view your files. In the file area, you can choose between different icon sizes, much like the options in the standard Windows Explorer.



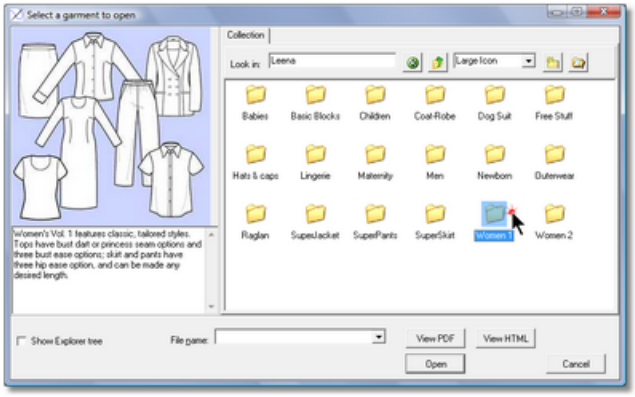
Large icons:

List:

You can also choose to view the Windows Explorer tree, or keep it hidden in the "simple" view. With the Explorer tree visible, files can be located in places other than the default folder.



With the tree hidden, your files can always be found in one place, and you have a larger window available for viewing files and folders.



2.3 Getting around in PatternMaker

Interacting with the program

It is possible to select, customize, and print a pre-designed garment with little more than a dozen mouse clicks. But you want to do more with PatternMaker, right?

To do so, you need to become familiar with the viewing, editing and drawing commands. You will learn:

- how to change your view of what's on the screen
- how to use the mouse in PatternMaker
- different ways to activate a command
- steps in using commands
- how to use X and Y coordinates

Looking around: PAN and ZOOM commands

There are several tools you can use to view different parts of your drawing. ZOOM changes the scale of the drawing, appearing to move you closer or further away. PAN moves you up, down, right, or left.

Remember that your drawing doesn't change when you zoom or pan; only your view of it changes. Think of the drawing area of the screen as the viewfinder on a camera that moves around to get different views of the drawing.

All the various ZOOM and PAN commands can be selected either with icons or from the "Zoom" submenu on the **View** menu. Most can also be selected with Hot Keys.

Special Zoom and Pan Keys

PatternMaker provides some special short cut keys to make it easier to activate the most commonly-used ZOOM and PAN modes:

<PgUp>	Zoom Out
<PgDown>	Zoom In
<Home>	Zoom in on mouse
<End>	Zoom All (show all objects)
arrow keys	Pan (Left, Right, Up, Down)

ZOOM with the mouse scroll wheel

If you point your mouse into the blue command line area, or a blank part of the icon bar, you can zoom in and out with your mouse scroll wheel.

See also:

Looking around: PAN and ZOOM

Different ways to select a command

There are several ways to select a command with PatternMaker:

- icons
- menus
- drop-down boxes
- typed commands
- Hot Keys.

Most commands are accessible in more than one way. Use whichever is most convenient at the moment.

When you have selected a command, the command's name appears in green in the Status Bar. When you finish the command, its name turns purple.

Icons

Standard Icons

The icons are provided to make it easy and quick for you to use PatternMaker with a mouse. If you learn how to use the icons, they will make your work faster and easier. However, you never have to use the icons at all – everything that you can do with icons can also be done with either a menu choice or a typed input. Use whichever is most convenient for you.

You can activate a command by clicking an icon with the left mouse button (**LM**). Clicking the right mouse button (**RM**) on an icon will give you the Help information for that icon.

Remember that not all commands are represented by icons – if you don't see an icon for a command, you may still be able to select it from a drop-down menu.

Context Icons

As soon as you start a command, a different set of icons will appear in the icon area. These icons represent options that you can select while doing a command. The icons that appear will vary, depending on the command you selected, and on what choices are available.

Example: When you first start PatternMaker, there is nothing in your drawing, and the MOVE icon doesn't appear. This is because there is nothing to move. After you draw an object, the MOVE icon and several others appear.

Example: When you activate the MOVE command, a different set of icons appears. These are the Selection icons. These are options you can use while selecting objects to move.

Menus

You can select the drop-down menus at the top of the screen with the mouse. When the menu appears, click the mouse on the command you want. This works like any other Windows application.

A menu item with an arrow next to it (➢) leads to a submenu with more choices.

If a menu item is not available, it will be grayed-out and you cannot select it. For instance, you can't select the MOVE command if there aren't any objects for you to move.

Selecting menus from the keyboard:

Select a drop-down menu by holding down the <ALT> key and typing the underlined letter in the menu's name. When the menu appears, use the up and down arrow keys to highlight the menu item and press the <ENTER> key. Or type the key letter of the item you want. The key letter for each menu item is underlined. (Most Windows applications work the same way.)

Example: Press <ALT>+F to select the File *menu*

Drop-Down Boxes

Many configuration commands can be selected from the drop-down boxes on the Status Bar. These include the current drawing color, current line color, style, and width, current Snap mode, and more. Any changes you make will remain in effect until you change them again.

Typed Commands

You can select any command by simply typing the name of the command . The letters you have typed will appear on the prompt line at the bottom of the drawing area. Press the <ENTER> key and the command will start. The chapters on Menu Commands give full lists of the commands available for PatternMaker.

Sometimes the proper name of a command is slightly different than the name listed in the menu. To find the proper name of a command, look for the command's name in the menu bar after you select it.

Hot Keys

The function keys <F1> through <F12> and various other special keys on your keyboard can be used to run certain commands. These are called the "hot keys." The Hot Key commands can be selected at any time, even if you are in the middle of another command. For instance, while doing the MOVE command, you may zoom in to see a very small object you want to select, then zoom out until the destination comes into view.

(Most of the Hot Key commands can also be selected with icons. These icons appear after you select a command.)

You will find that using the Hot Keys is essential to using PatternMaker. Tutorial 2 gives you an introduction to how they work.

See also:

icons

Configuring Hot Keys
Configuring the icon bar

Using the mouse

Understanding the function of the mouse buttons is one of the most important things necessary for success with PatternMaker. The mouse clicks activate, advance, and conclude all the commands you will use.

The **left mouse button** is used for selecting things. Use it to select:

- menu commands
- icons
- points
- objects

Many commands let you select more than one object or point at once. For example, the MOVE command will move one object or every object in the drawing.

Some commands let you select only one object at a time. With the OFFSET command, for example, you can add a seam allowance to one object at a time.

We will use the abbreviation **LM** to indicate a left mouse click.

The **right mouse button** is used to confirm what you have selected.

It indicates to the program that you have finished selecting things and are ready to proceed to the next element of the command.

We will use the abbreviation **RM** to indicate a right mouse click.

The <ESC> key can be used interchangeably with **RM**.

To help a beginning user with using the left and right mouse correctly a Right-click Context menu is set by default.

The basic rules of mouse operation are:

- If you're drawing something, use **LM** to enter a point.
- If you aren't drawing something, use **LM** to choose a command or answer a question.
- Use **RM** to end whatever you're doing.
- Don't "click and drag" like you do with many other computer applications. Just click the button and release it.
- The normal mouse cursor looks like an arrow. An hourglass-shaped cursor means you should wait for the computer to finish what it is doing.
- If the mouse cursor is outside the PatternMaker window on your computer screen, your inputs won't be read by PatternMaker.

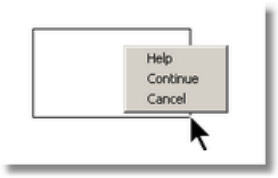
The Mouse Coordinates box in the menu bar will tell you the current position of the mouse.

These are standard X-Y coordinates. The first number is the X, or horizontal, position and the second number is the Y, or vertical, position. (See X and Y Coordinates for full details.) These numbers represent either inches or centimeters, depending on the measurement units you chose during program setup.

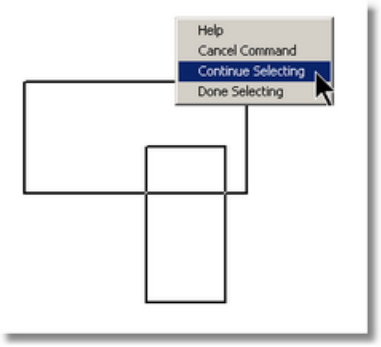
> ***Tip:*** *You can change between the inch and metric formats at any time, by simply clicking on the Mouse Coordinates box in the status bar.*

Right Mouse menu

The Right Mouse menus provide guidance while you're getting used to the left-click/right-click circumstances in PatternMaker. If you accidentally right-click when you should left-click, the Right Mouse menu guides you toward the correct choice. You can also access Help for the selected command.



If you're using a command with just one step, such as a drawing command, the Right Mouse menu will let you either cancel the command or keep drawing.



If the command involves selecting things, the menu is slightly different. It will let you cancel the command, continue selecting, or indicate that you are done selecting.

If you no longer want to use these context menus, the control setting is available on the "Configure" or "Configure Defaults" form on the **Settings** menu.

Tip: When you do not want to use the Context menu any longer:

We advice you to use the Right mouse when you are done with selecting points or objects (confirming the selection)
and to use the <ESC> button for cancelling commands.
In this way the use of which mouse will be more logical and you will always use the right mouse.

Hot Key Functions

The hot key functions are special functions that can be selected by typing one of the Function keys (<F1>, <F2>, etc.) or other special keys on your keyboard. Some of these are also available through command lists or icons; others are options of other functions.

Hot key functions are useful because you can use any of the hot key functions even while doing another function.

You can reconfigure these key assignments if you want to (see Configure options), but these are the default settings:

KEY	FUNCTION
<F1>	Zoom out (makes everything appear smaller)
<F2>	Zoom in on the center of the drawing area (makes everything appear bigger)
<F3>	Zoom in on the mouse. To examine a detail of your drawing, point at it with the mouse and press <F3> a few times.
<F4>	Grid on/off. Shows or hides the grid points.
<F5>	Points on/off. Shows or hides the vertices of all objects.
<F6>	Select snap. A menu will appear, listing all available snap modes. (Each snap mode also has its own hot key -- see below.)
<F7>	Unassigned
<F8>	Unassigned
<F9>	Pan to mouse. The view is moved so the current mouse location is at the center of the drawing area.
<F10>	Configure. Opens the Configuration form where you can set various program options.
<F11>	Layers. Open the Layers dialog box.
<F12>	Page Grid on/off. Shows or hides the page grid.

For the following, hold down the <CTRL> key while typing the given Function key:

<CTRL>+<F1>	Snap off
<CTRL>+<F2>	Snap to grid. Also shows the grid, if it's turned off.
<CTRL>+<F3>	Snap to end point
<CTRL>+<F4>	Snap to nearest
<CTRL>+<F5>	Snap to ortho
<CTRL>+<F6>	Snap to mid point
<CTRL>+<F7>	Snap to intersection
<CTRL>+<F8>	Snap to offset
<CTRL>+<F9>	Snap to distance from end point
<CTRL>+<F12>	Yardage Grid on/off
See also:	Using Snap Modes

For zooming in and panning

<PgUp>	Zoom Out
<PgDown>	Zoom In
<Home>	Zoom in on mouse
<End>	Zoom All (show all objects)
arrow keys	Pan (Left, Right, Up, Down)
See also:	Looking around: PAN and ZOOM

Other hot keys:

New	Ctrl+N
Open	Ctrl+O
Save	Ctrl+S
Print	Ctrl+P
Macro	Ctrl+M
Undo	Ctrl+Z

Activating a command

After you activate a command, you will usually be asked to select the object(s) on which the action will be performed. This is done by left-clicking on one or more objects. Every command has *at least two steps* that you must either complete or cancel before you can do anything else, and some commands that ask you to select things have more than two steps.

If you are in the middle of a command, this is indicated by the command name in **green** at the far right side of the status bar:

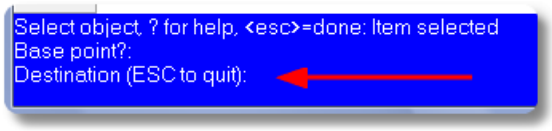
Then you must let the program know you are done selecting by right-clicking (**RM**) the mouse, or you cancel bij clicking the <ESC> key.
The command will then complete its action or, in some cases, request additional information from you. (See the Reference chapters for step-by-step instructions for each command.)

You must complete the current command (or cancel it) before you can begin a new command. To cancel a command, press the <ESC> key, or click the **RM** button. Because this will be confusing for you we do not recommend to to cancel a command by clicking RM.
When you have finished or cancelled a command, the command name appears in ***purple/italics*** in the status bar.

The most recent command you have used remains "available" until you select a different command. This is a convenient way to repeat a command without having to continually select it from the menu or click the icon. For example, if you have just drawn a rectangle, you can immediately draw a second rectangle simply by beginning to click its first point.

If you find yourself in a situation where the commands you want are not available and it seems that you can't do anything, check the status bar. You probably have a command listed there in **green**. Green means you're in the middle of a command, and the program is waiting for further instructions from you. You have two options at this point:

- If you didn't mean to be in the middle of a command, **right-click** your mouse or press <ESC> until the command name turns ***purple***. (This may require more than one click/press.) When the command is purple it means it is inactive, and you can continue with some other action.
- If you are in the middle of a command and don't know what to do next, check the command line. It will give you instructions on what it is waiting for:



The most recent command is on the bottom

See also:

Selecting Objects or Points

Repeating a command

If you click the mouse on the screen again after you've finished a command, the last editing or drawing command you performed will be repeated. This allows you to draw or edit many objects without having to select the same command icon over and over. If you aren't sure which command will be repeated, the command's name is displayed in purple on the far right end of the status bar.

Be careful about clicking the mouse in the drawing area indiscriminately – it's easy to repeat a command without meaning to.

Remember: if you don't understand what the computer's trying to do, read the commpand line.

Canceling a command

To cancel a command, press the <ESC> key , or click the **RM** button when you have set the context menu on. Some commands have more than one step, and therefore require more than one click.

Remember, you haven't cancelled the command until the command name in the status bar turns back to purple italics!

MOVE command is active

MOVE command is inactive

Undo/Redo

If you complete a command and realize it wasn't what you wanted, you can undo the change with the UNDO command.

PatternMaker 7.5 has a multiple undo/redo feature. The program configuration determines how many steps you can undo. More undo steps require more computer memory and will make the program run more slowly, so you can adjust the undo number to something that you like. The default is 9.

See also:

UNDO command

REDO command

Selecting objects and points

Selecting objects or points is the second step in any editing function, after you have activated a command. Most commands require you to select one or more objects, or one or more points, on which to perform an action. Here is the basic procedure:

- Use **LM** to click once on each thing you want to select.
- If you're selecting points, try using Snap To Endpoint (<CTRL>+<F3>). The mouse cursor will jump precisely to the nearest vertex. You can also use the ZOOM commands to focus closely on the area you want to view.
- If you're selecting objects, click near the edge, not in the center of the object.
- An object will get highlighted when it is selected. A vertex (a point) will turn red when it is selected.
- Use **RM** to indicate that you've finished selecting things. The command will then continue to the next step.

Some editing commands only work on one item at a time. In this case, if you select a second object or point, the first is unselected. Other commands, such as CUT and JOIN, require you to select two objects, one at a time. The rest of the commands can work on any number of objects.

Note: You cannot select a mixture of objects and individual points. For commands on the **Edit** menu you select entire objects; for commands on the **Point** menu you select individual points.

Selecting

There are three ways to select objects or points:

- One-by-one
  - Click on the object or the point: **LM**, **LM**, **LM**... until each object/point you wish to select is highlighted.
  - Indicate that you're finished selecting -- **RM**

- Selection window

  - Click the selection Window icon or type <w>
  - Indicate one corner of the selection area -- **LM** (left upper corner)
  - Move the mouse diagonally (don't click-and-drag -- just move the mouse) and indicate the opposite corner of the selection area -- **LM**

    Any object that has a point within this window will be selected (highlighted).

    Window selection never un-selects things.
  - Indicate that you're finished selecting -- **RM**

  Note: you can use the selection window in combination with the method above, before ending the selection set.

- Select all

  - Click the All Objects icon, or type <A>

    Every visible point (and therefore every visible object) in the drawing will be highlighted (selected).

    Note: objects are not selected if they are on a layer that is locked or turned off.
  - Indicate that you're finished selecting -- **RM**

  Note: you can use "All Objects" in combination with either or both of the methods above, before ending the selection set.

Unselecting

If you accidently select something by mistake, just click on it again (**LM**) to un-select it. An object will be "un-highlighted" (its original appearance) when you unselect it; a point will return to its original color (not red).

Using Snap modes

One of the most helpful -- and most under-used -- features of PatternMaker is the many Snap modes.

A Snap mode makes the cursor jump to a precise location, so you don't have to worry about being so precise as you move the mouse around. When you are "in" a Snap mode and you enter a point with the mouse, the "snap point" closest to the mouse location is entered, rather than where the mouse cursor is actually pointing. This makes it possible to enter a point with 100% accuracy.

You will often need to switch between snap modes while you are in the middle of a command. Therefore, all of the Snap modes can be selected with either icons or Hot Keys.

Example:

Move a skirt piece so that its center back point is aligned with the grid

1. Activate the MOVE command.
2. Select object to move: **LM** on skirt piece; **RM** to finish selecting

3. Turn on Snap to Endpoint: <CTRL>+<F3>. Cursor jumps to nearest vertex.
4. Select base point for move: **LM** on center back point
5. Turn on Snap to Grid: <CTRL>+<F4>. Cursor jumps to grid points.
6. Select destination for move: **LM** on a grid point
7. MOVE command is finished.

Here are the most common Snap modes:

Name: **Snap Off**
Hot Key: <CTRL>+<F1>
What It Does: Turns off any active Snap
Why Use It? When you want the cursor to move around normally

Name: **Snap to Grid**
Hot Key: <CTRL>+<F2>
What It Does: The cursor jumps from one grid dot to another. (And you can customize the size of the grid.)
Why Use It? Align the edges of objects; quickly move something a distance equal to the size of the grid.

Name: **Snap to Endpoint**
Hot Key: <CTRL>+<F3>
What It Does: The cursor jumps from one point in an object (a vertex) to another.
Why Use It? Essential for moving individual points; excellent for selecting a rotation point.

The other Snap modes are discussed in Overview all Snap modes.

Special selection tips

- If it's hard to tell what you're selecting, try using the Show Vertices command (<F5>) to show the vertices, and/or zoom in (<F3>) to get a better view.
- For text objects, click on the lower left corner.
- For polygon objects, click **LM** on one of its points or anywhere along the edge (not in the middle) of the object.
- For commands that refer to objects, clicking on a vertex always selects the entire object. (Try using the Snap To Endpoint snap mode.)
- Note that the corner control points are not actually on the polygon; they are near it.
- You can't select an object that is on a locked layer (see Layer Lock).
- For dimension objects, click on either endpoint.
- For some functions, PatternMaker doesn't just want you to select a point, but the line segment or arc connecting two points. Just put the mouse on the appropriate segment and click.
- For symbol objects, click on the insertion point.
- Click **RM** or press the <ESC> key when you are done selecting objects.

Often if several points or objects are close together you will have difficulty selecting the one you want. There are several ways to deal with this.

- If points from two objects are placed at the same location, the **X** marks cancel each other out, and will not be visible. Put one or more of the objects on a different layer and turn the layer off. (See Using Layers). This will get them out of the view and make your work easier.

- The point selection window can help you select a specific point if it overlaps another point.
- Points and objects are "stacked" in the order they are drawn, like stacking sheets of paper, and the top one is the one that will be selected. Use the TO FRONT or TO BACK commands to change the order of objects, so that you can select the one on top.
- The ID Object Panel can also be very useful in cases where you are having trouble figuring out why a point is not getting selected. Sometimes an object will have several points in the same position, or you may find that two different objects have points in the same place. The ID Object Panel will help you sort this out.

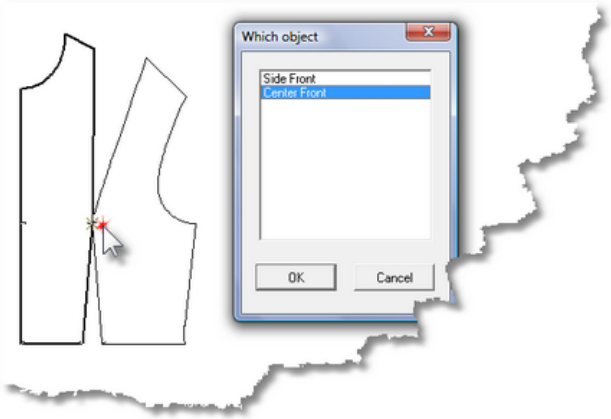
If you can't find an object that you know is somewhere in the drawing, check these things:

- Objects out of view in the drawing area: The easiest solution here is to select "Zoom All" from the menu. You can also use the Function keys or icons to zoom/pan to where the object is (See ZOOM and PAN functions).
- Layer off: If an object isn't showing because it's in a layer that's turned off, there is no way to select it. Use the LAYERS command to turn on all the layers you need before selecting a command. For more information about how to turn layers on and off, see Using Layers.

Using the point selection window

Sometimes when you need to select a point, you find that more than one object has a vertex at the same place. If the object you want is underneath another, it can be difficult or impossible to select the correct point. You can get around this problem by switching layers, or using TO FRONT and TO BACK, but an easier way is the point selection window.

If you click a point at a location where two objects overlap, a point selection window opens, with a list of the objects involved. If the objects have names (NAME OBJECT), the names will be listed; otherwise, all objects will be listed as "No Name." When you select an object from the list, the corresponding object on the screen is highlighted. In this way, you can select the object containing the point you want, even if you can't tell which object it is in the list.



See also:

Special selection tips

X and Y coordinates

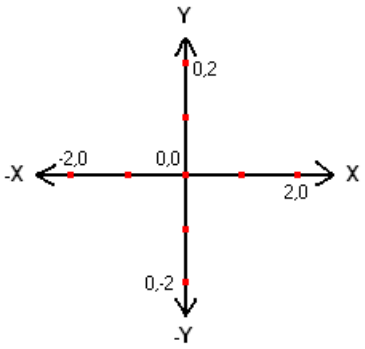
As you move around in the whole vast drawing area, which spreads out infinitely in all directions, you need some way to keep track of where you are. You also need a way to supply input to PatternMaker as you are drawing your pattern. PatternMaker uses a grid system of ***X,Y*** coordinates, somewhat like the *N, S, E, W* designations of street addresses.

If it's been a while since that high school math class, here's a quick refresher course:

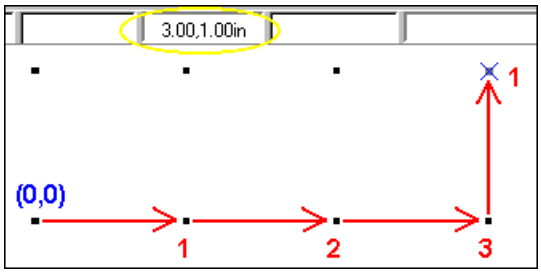
Imagine one horizontal line and one vertical line coming together in an intersection. The point where they cross is called the origin. This is the "zero" point. The origin is given the coordinates `0,0`.

Every position on the screen can be represented by a pair of numbers, which represents its position relative to the origin.
The first number in each pair represents the distance from the origin in the ***X***, or horizontal, direction.
The second number represents the distance from the origin in the ***Y***, or vertical, direction.
The X and Y are divided by an ","sign. This means X,Y

The horizontal line to the right of "zero" is the positive X direction; to the left is the negative X direction. The vertical line above "zero" is the positive Y direction, and below is the negative Y direction (see diagram). The lines extend infinitely in all four directions.



In PatternMaker, the status bar tells you the position of the mouse cursor at all times (see illustration below).



To find the position of a point, simply count the number of units (this is either inches or cm, depending on your program configuration) to the right or left, and then count the number of units up or down. That pair of numbers is the *coordinate position*.

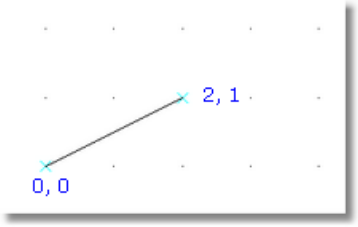
At any given moment, your view of the drawing area is limited to the boundaries of your screen. The origin ("zero point") may be far off the screen, but the position indicator helps you keep track of where you are.

As mentioned above, coordinates are used not only for PatternMaker to tell you something (where you are in the drawing), but also for you to tell PatternMaker something -- where you want to put something. There are four types of coordinates that you can use: absolute, relative, polar, and relative polar:

Absolute coordinates

Somewhere in the drawing area is the "0,0" point -- the place where the horizontal measuring line meets the vertical measuring line.. In reality, you probably won't pay attention to where this is. You'll be busy zooming and panning around and won't ever notice where "0,0" is. But it is important to realize that it exists, because it explains the numbers in the mouse coordinates area on the status bar.

Absolute coordinates are always measured from the point 0,0 -- the origin of the grid. For example, point (2, 1) is two units to the right of the origin, and one unit above the origin.

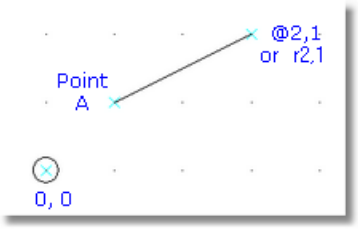


Relative coordinates

Much more relevant to your regular work is the idea of "relative" coordinates. This simply means that you are measuring from your last point, rather than from that elusive "0,0" location.

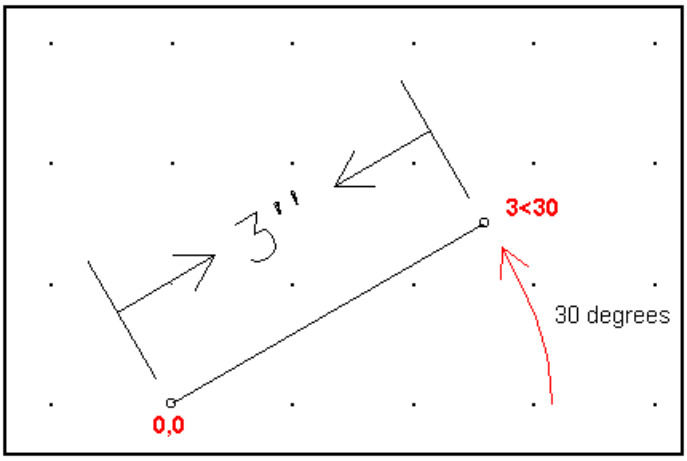
> *Scenario:*
>
> You've experimented with zooming and panning and you have no idea where you are on the screen. Now you want to draw a 3x5" rectangle. You could draw from 0,0 to 3,5, but who knows where that "0,0" point is by this time?

The "**r**" or the "@"sign is used to indicate that the next coordinates you type are going to be of the relative type. For example, Point A is at position (1,1); if you enter `r2,1` for the following point, it is positioned two units to the right of, and one unit above Point A. Its absolute coordinates are (3,2), but you don't have to know that in order to draw the line.



Polar coordinates

Polar coordinates are a bit different from standard *X,Y* coordinates. Polar coordinates measure distance and degrees, rather than distance and distance. Polar coordinates appear as two numbers separated by an angle sign < rather than a comma. The first number is the distance and the second number is the angle in degrees. Angles are measured from a base line that starts at the origin (0,0) and extends to the right. Positive angles go up and negative angles go down. For example, the position represented by 3<30 is located three units from the origin, at an angle of 30 degrees (diagonally upward).



You can also make polar coordinates relative to the last point you entered by preceding the pair of numbers with the r or @ sign, as in relative coordinates, above.

Tutorial: Using coordinates in practice

Skills: Enter coordinates using the keyboard, LINE command, MOVE VERTEX command

When you are entering coordinates, you don't have to tell the program which type you are going to use. Just pick one and start typing -- PatternMaker will figure it out as you go.

Exercise 1: Draw a horizontal line of a specific length

- Activate the LINE command
- Click **LM** anywhere in the drawing area, to indicate one end of the line
- Type `r15,0` and press <ENTER> (typing a space after the comma is optional)

The line ends 15 inches/cm to the right of your first click.

Exercise 2: Draw a vertical line between two specific points

- Activate the LINE command
- Type `0,0` and press <ENTER>
- Type `0,-10` and press <ENTER>

If you can't see your line after you do this, use the <END> key to Zoom All

The line starts at the origin and extends 10 inches/cm downward.

Exercise 3: Draw a line that ends a specific distance away

- Activate the LINE command

- Click **LM** anywhere in the drawing area, to indicate one end of the line
- Type `r-5,2` and press <ENTER>

The line ends 5" to the left and 2" upward

Exercise 4: Draw a line of a specific length, at a specific angle

- Activate the LINE command
- Click **LM** anywhere in the drawing area, to indicate one end of the line
- Type `r7.5<45` and press <ENTER> (typing a space after the < is optional)

Exercise 5: Adjust the position of a point by a specific amount

- Activate the LINE command and click **LM** two times, anywhere, to draw a line
- Activate the MOVE VERTEX command
- Click **LM** to select the point at one end of the line, then click **RM** to indicate that you're done selecting
- Type `r1,-0.5` and press <ENTER>

The point is moved one inch/cm to the right and 1/2 inch/cm downward.

You'll use this technique frequently when you want to make design changes to the patterns drawn by the macros.

Exercise 6: Draw a rectangle with specific dimensions

- Activate the RECT command
- Type `-5,-2` and press <ENTER> (absolute coordinates)
- Type `r10,4` and press <ENTER> (relative coordinates)

The origin (0, 0) should be located in the center of your 10x4 rectangle.

Tutorial 3 gives more practice in using the various kinds of typed point inputs.

Patterns and Printing

3.1 Using the pre-designed garments

Here's where we get into really using PatternMaker. In this section we will:

- talk about what "macros" are
- talk about how to take proper measurements
- use your measurements to create a personal measurement table
- use that measurement table to create a custom-fit test bodice
- print out the pattern and talk about putting it together

Your Custom Fit

What Are Macros?

Each PatternMaker macro is a small computer program which is run by PatternMaker. You will be asked to make some garment style choices and enter your measurements. The program then does some calculations and draws a garment pattern. The calculations are the same sort of calculations and measurements a pattern makers uses to draft a pattern with pencil and paper and ruler. The resulting pattern is made up of polygon objects which can be modified like any other object in your drawing. In other words, once you've made a pattern from a macro, you can do anything you like with the results.

One collection of women's garments comes with your PatternMaker program. Many other collections are available separately.

Why Use A Macro?

Ever been frustrated with patterns that do not fit? Do you buy patterns that fit your hips, but not your body? Don't you wish you could redraft your patterns to fit YOUR measurements, instead of having to use the sizes supplied by a pattern publisher? Do you feel overwhelmed by the thought of drafting a pattern from scratch, or just want a place to start? Macros could be the answer!

PatternMaker's system of macros create custom-fit sewing patterns from your personal measurements. These are more than just slopers – most of the macros draft complete patterns, ready to cut out and sew. You can create an entire wardrobe from a single set of measurements. You don't have to know anything about flat pattern drafting to get a good fit – although if you do, you may enjoy using the macros as a starting point for your own designs.

The macro system also offers unmatched flexibility and expansion opportunities. Many different designers can write macros that will work with PatternMaker. You're not limited to just the garments that come with the system.

Will It Really Fit Me?

The PatternMaker macros have been well-tested in real life. They are based on a fitting system that has been in use by custom tailors, working with pencil and paper, for years. The collection of macros included with this package have been written by professional tailor Leena Lähteenmäki, and all of the patterns have been tested on subjects with a variety of body types and sizes. We have found that they will fit nearly everybody, large and small. More important, the measurements are easy to take and the measuring instructions are easy to follow. If you do need to make adjustments, it's much easier to start with a pattern that already matches your measurements. If you make a mistake, or want to make a change, it's a matter of seconds to redraw a macro with different measurements.

Yes, But Will It Really Fit Me?

Our macro patterns will fit nearly everybody over a wide range of sizes and builds, but no computer-generated pattern will fit everybody. If you have a special fitting problem, such as an asymmetrical body, you may need to make adjustments on your own. The macros will give you a good starting point to work from.

Most of these garments require an intermediate or advanced level of sewing skill. If you do not already know how

to assemble a garment, install a zipper, etc., you will need to refer to a general sewing text as well as the macro instructions and this manual. Please do not rush. We can give you the patterns, but it's up to you to sew the best clothes you can. For beginners, the Skirt macro is the easiest to make. For advanced sewists and pattern designers, the Bodice macro serves as a sloper, or fitting shell, to design your own patterns.

What Else Is There?

The Deluxe Editor and Pro Studio versions of PatternMaker include the Women's Vol. 1 Garment Collection. The Grading Studio and Marker Studio include three collections of your choice. Many other collections are offered separately. To find out what's currently available, check our web site at:

www.patternmakerusa.com

Where Do I Start?

To start making your own patterns, first have someone help you take your measurements. Your macro package includes a measuring chart which details all the measurements necessary for that particular collection. Make sure you're using the measuring chart specifically for the macro pattern you want to make. Different designers may use different drafting systems, and require different measurements, or that the measurements be taken in a slightly different way.

> **Note:** Find someone to help you measure. Do not try to measure yourself. It will distort the measurements and give you poor results.

Next, save your measurements in a new measurement table (see Using Measurement Tables, below).

Finally, run the MACRO command and select the macro file you want to use. Each macro will be a bit different but they all follow the same general format:

- select garment options and answer questions
- select a measurement table (or enter measurements manually)

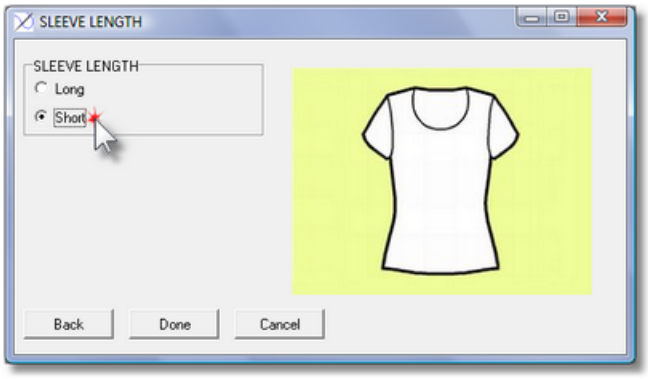
After you input the information for the macro, you will see an hourglass icon while the program runs the macro and draws the pattern. When the macro finishes, the hourglass will turn back to the pointer icon.

If you do not see your pattern, or if you see only part of it, press the <END> key on your keyboard to view the complete pattern.

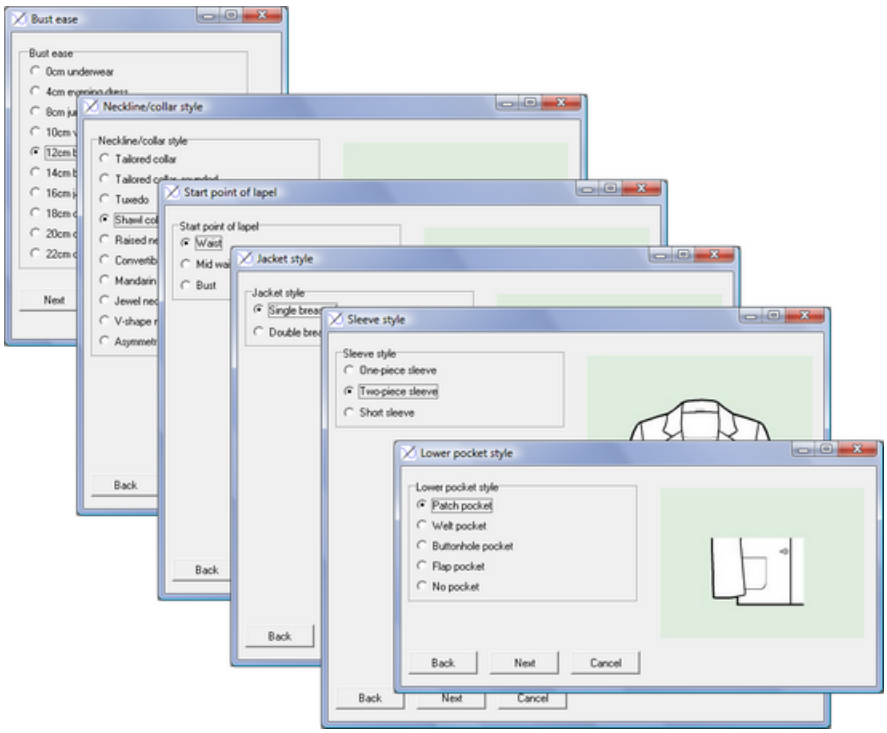
What is a macro?

A "macro" is the technical term for the pre-designed garments. It is simply an automated sequence of commands which automatically perform the same steps you would use to draw a pattern from scratch. To create a pattern, the POLY command is run repeatedly (draws shapes), pausing at times to ask for your input (style selections and measurements); some text is added, button and grain lines are drawn, etc. (pattern details). And in the end, a custom-fit pattern is drawn on the screen.

The designer who creates the macro can make it very simple...



...or very complicated:



With PatternMaker, the pre-designed garments are a "modular" feature. You don't have to be limited to one person's (or even one company's) idea of what a "popular" pattern is. There are many creative people around the world who are developing all kinds of macros that can be used with PatternMaker.

It's important to understand that the options available in each macro depend entirely on the whims of the designer. Some macros will have style pictures; some may not. Some have an option to add seam allowance; some do not. Some are for sale; others may be given away at no cost.

Frequently Asked Questions:

Where do the macros come from?

Can I create my own macros?

Can I adjust the body measurements after a pattern is on the screen?

How to run a macro

These are the basic steps:

1. Click the "Macro" icon, or select "Macro" from the File menu.
2. Select a designer.
3. Select a garment collection.
4. Select a pre-designed garment ("macro").
5. Follow the options in the macro: choose style options, if available, and enter your measurements.
6. Your pattern is drawn on the screen!

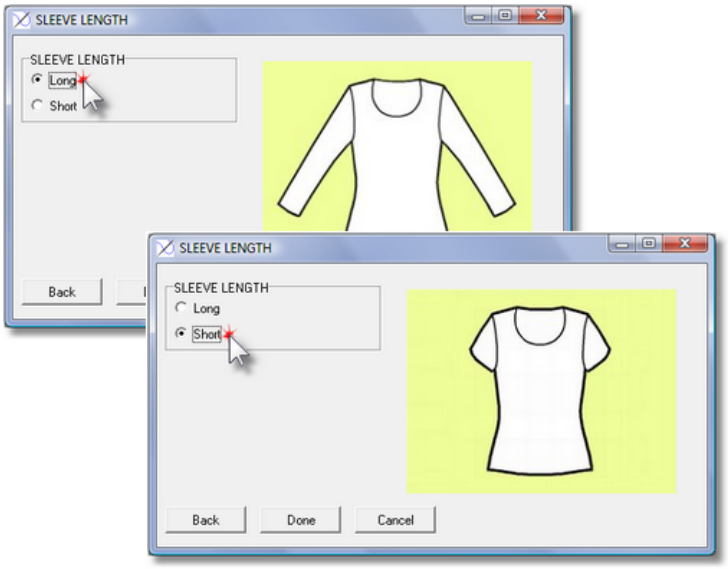
See also:

LaunchPad interface

Style option pictures

Most of the pre-designed garments have at least one style option. The styles are illustrated in the dialog boxes, to indicate what the designer had in mind with each option.

Choose your preference for each option, and then click the "Next" button (or the "Done" button, when you come to the last option).



If you change your mind, you can go back to a previous page and make a different selection.

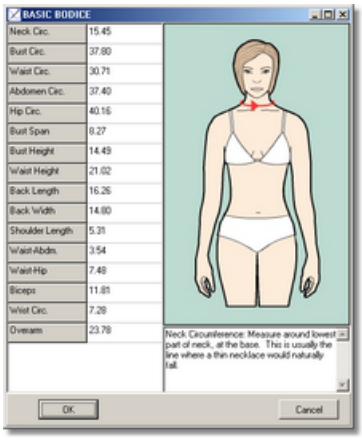
*Note: The style option pictures **do not** show a cumulative representation of your choices throughout the macro.* Each set of images is only intended to illustrate the differences of that specific option. For example, consider the graphics above. If you had chosen "v-neck" on the previous page, you should not be alarmed when these pictures depict a jewel neckline, because this particular option page is only for choosing sleeve length.

When you finish the style choices, your pattern will reflect your selections, even though the option pictures do not.

Measurement pictures

After you choose style options, it's time to enter measurements.

Each measurement is accompanied by an illustration, which shows you exactly where to measure, plus some explanatory text.



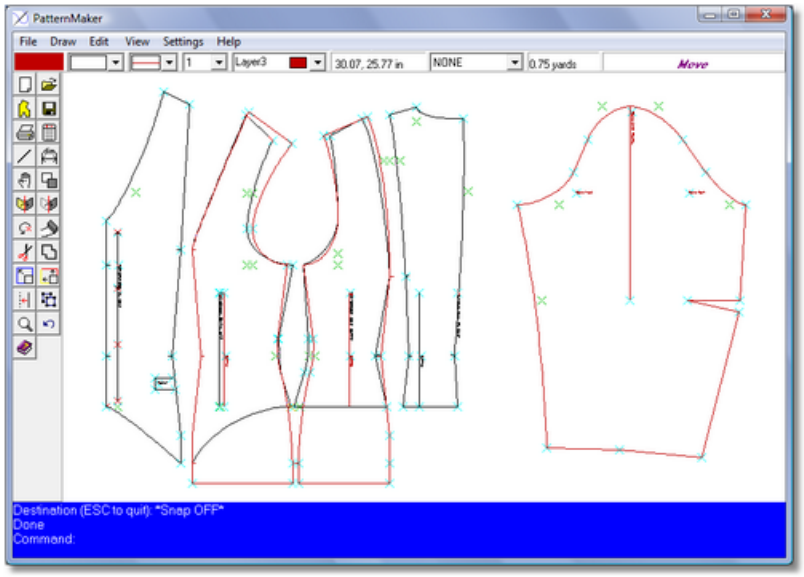
Replace the default numbers with your own measurements, then click the "OK" button.

Use no commas in a number. Type 41.5 and not 41,5

You can save personal measurement tables and avoid typing in all your measurements for each pattern. See Using Measurement Tables, below.

Combining macro styles

You can mix style options from different macros, if one pattern has a particular feature you want to add to a different pattern. You can run more than one macro "on top of each other," and move or erase the pieces you don't need. Note that you may need to move some points to make sure that adjoining pieces will match properly if they are from two different macros. For example, if you want to add sleeves to a vest pattern to make a weskit blouse, you'll need to make sure that the armscye of the vest matches the armscye of the pattern that the sleeves came from.



Some points of the vest (black) need to be moved to match the armscye of the blouse (red).

Related topics:

Working with points

MOVE VERTEX command

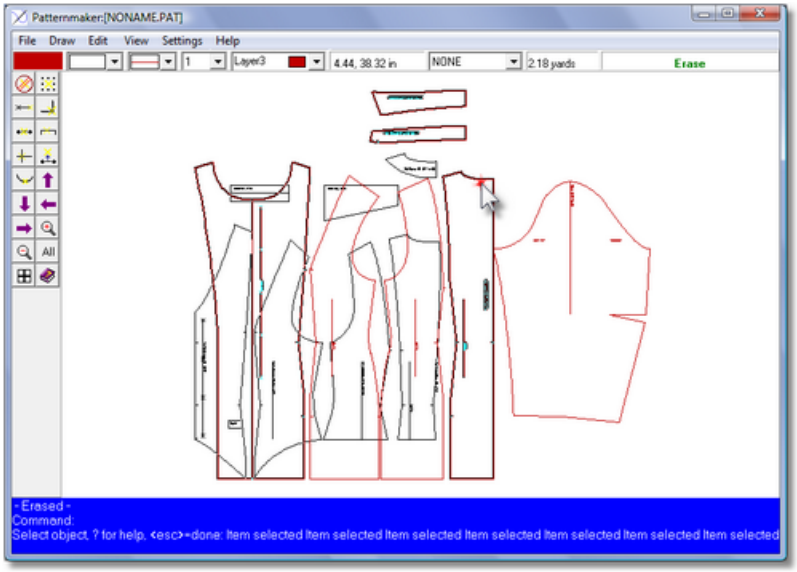
Tutorial: Combining macro styles

Skills: Run a macro, ERASE command, MOVE command, OFFSET command, Snap to Endpoint, Snap Off, change layers, page grid

In the Basic Reader you don't have the commands available to move the points on-screen, but you can still combine styles from different macros. Here's an example that shows how. There's a lot of information given here, but links are provided so that you can read more about each step if you need more help.

Let's say you want to put the sleeves from one garment onto the body of a different one. We'll use the Classic Vest from the Women's Vol. 2 collection and Fitted Blouse from the Women's Vol. 1 collection, but you can apply the same principles to any combination.

1. Run the macro for the Classic Vest, using the princess seam model. Make a note of which bust ease option you use. Neckline options don't matter.
2. Enter your measurements, or, for the purpose of this tutorial, just use the defaults.
3. **Seam allowance:** You'll have to decide whether to use seam allowance or not. If you do, it's there when you cut out the pieces, but it's harder to distinguish between the two patterns. If you use no seam allowance, you just have to remember to add it when you cut out the pattern.
4. Use the ERASE command to erase the armhole facings of the vest, which won't be needed on a garment with sleeves.
5. Change to a different layer so that the second pattern will be drawn in a different color. In this example, we've used Layer 3, which draws in red.
6. Run the macro for the Fitted Blouse. Use the same bust ease, and choose the princess model; collar style doesn't matter; choose fitted sleeve, long sleeve, no shoulder pads. Make your choices about the measurements and the seam allowance, as above.
7. When the pattern comes up on the screen, ERASE the blouse center front, center back, and collar pieces.

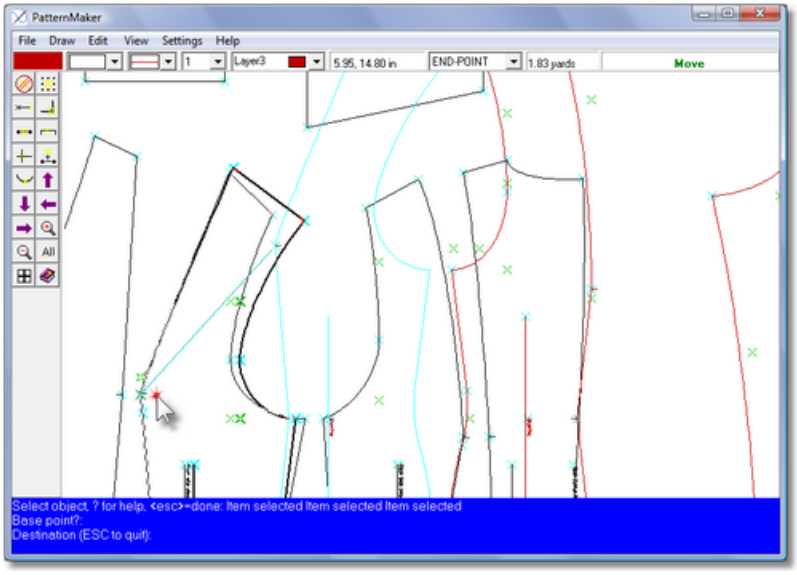


The four pieces to be erased are highlighted

8. Activate the MOVE command. Click **LM** on the side front piece of the Blouse, and **RM** to indicate that you're done selecting.
9. Now the command line says `Base point?` This is the "handle" where you will pick up the piece to move it. You need to precisely align the blouse piece with the vest piece, so using a snap mode is best in this circumstance. Press <F5> to show vertices, and turn on Snap to Endpoint (in the status bar or

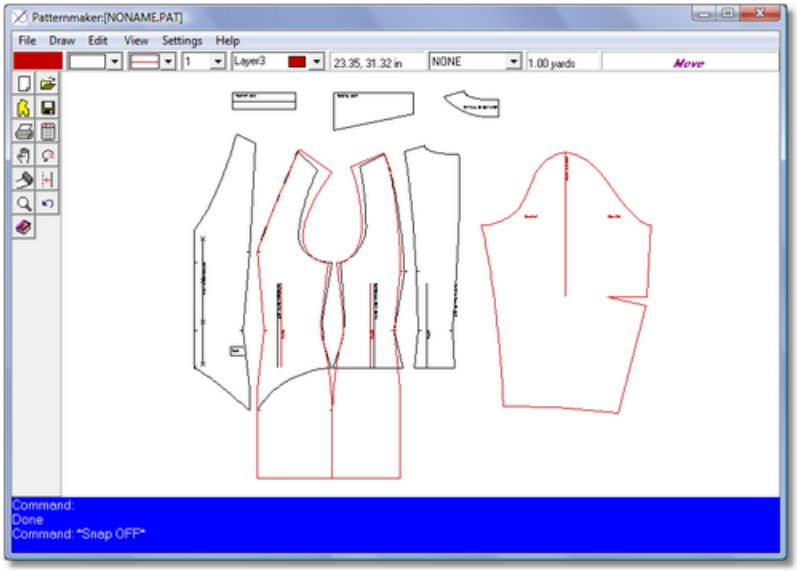
<CTRL>+<F3>).

10. **LM** on the point at the bust apex (zoom in with <HOME> if you can't see all the points clearly), then **RM** to indicate that you're done selecting.
11. Move the blouse piece on top of the vest piece, and let the Snap align the bust apex points of the two pieces. Click **LM** to put the piece down. Remember, there's always Undo, if you don't get the right points on the first try!

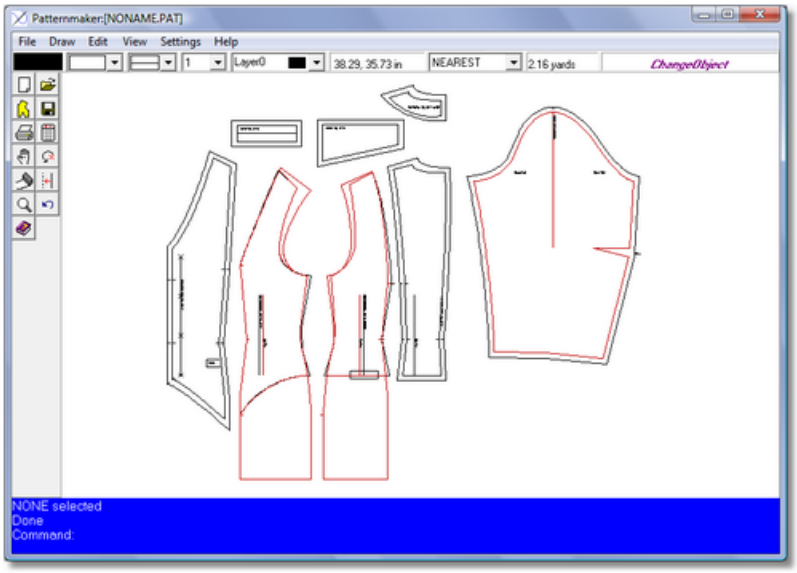


The bluish line shows the path from the origin to the destination

12. Repeat steps 8-11 to move the blouse side back piece on top of the vest side back. Use the waist points to align the two pieces. Now your pattern should look like this:

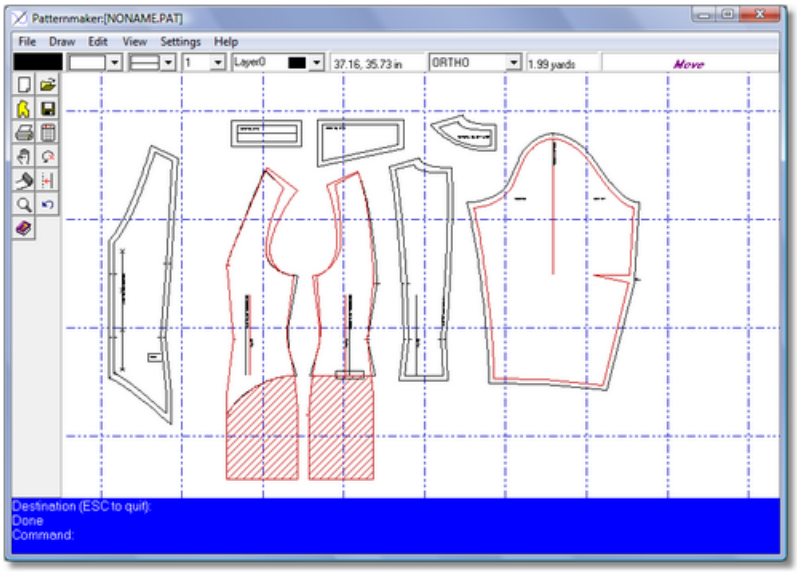


13. If you didn't enter a seam allowance when you ran the macros, this is a good time to add it (OFFSET command) to everything *except* the side front and side back pieces:



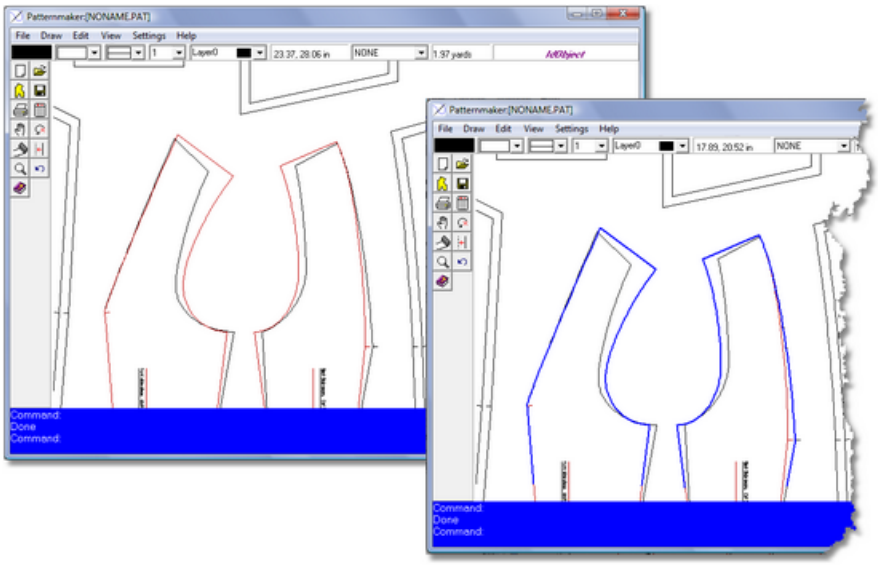
14. After the seam allowance is added you might have to MOVE the pieces apart so that the lines don't overlap. The seam allowance and the original pattern piece are two separate objects, so be sure to click on both when you select which objects to move. (If the Snap to Endpoint gets in your way, turn it off with Snap Off or <CTRL>+<F1>.) Also consider turning on the page grid (<F12>) to see if any page intersections fall at inconvenient places on the pattern pieces, or if you can move pieces to make more efficient use of the paper.

    Remember that you'll be ignoring the lower part of the blouse pattern (shaded area below):



15. Now go ahead and print the pattern (you can click on pages in the Print Preview window to turn off pages you don't need to print) and put the pages together.

16. Cut out the pattern. When you get to the side front and side back pieces (remember to add the seam allowances), you'll be switching back and forth between the two sets of lines. The sleeve belongs to the second color (in this case, red), so follow the red lines around the whole armhole area. Then just merge back to the black lines to finish cutting the piece according to the original vest pattern.



The blue outline shows where you'll cut to combine the patterns

17. Now the sleeve from the blouse will fit the armhole of the vest!

Using Measurement Tables

You can save your measurements in a table that can be reused in other macros. This saves you from having to type in the measurements each time a macro is run.

Each garment collection comes with a measurement "template" that demonstrates which measurements are required. This template has a file extension of "**.mmt**," or "**Master Measurement Table**."

Measuring

Note: These measuring instructions apply only to the pre-designed garments from Finnish designer Leena Lahteenmaki. Other designers may require measurements to be taken differently. Please be sure to carefully read the instructions that come with each garment collection.

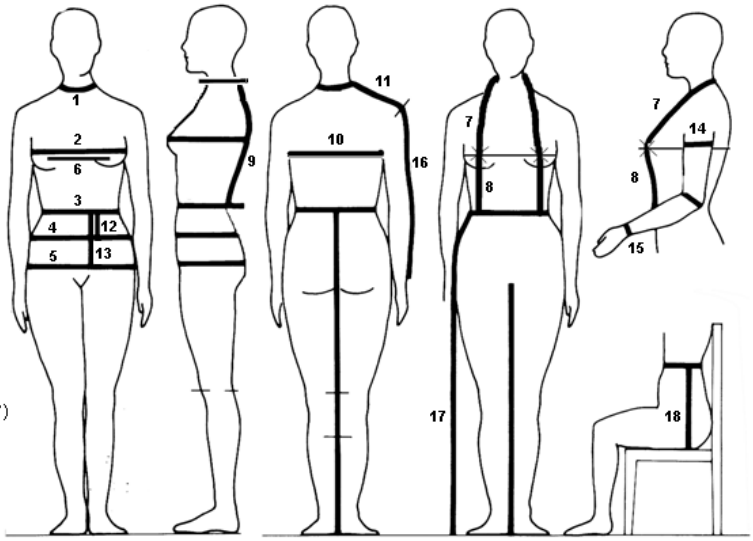
Measuring Chart for Leena's Women's Garment Collections
Master Measurement Table: Leena default_women

You will need:

- four pieces of 1" wide elastic
- a measuring tape
- something to drape around your neck -- a necklace or piece of string, etc.
- an assistant to help you measure

1. neck circ.
2. bust circ.
3. waist circ.
4. abdomen circ.
5. hip circ.
6. bust span
7. bust height
8. waist height
9. back length
10. back width
11. shoulder length
12. waist-abdm
13. waist-hip
14. biceps
15. wrist circ.
16. overarm length
17. outside seam
18. crotch depth

Measure bust height (7) and waist height (8) around the neck and **divide by 2.**



Do not try to take the measurements yourself! Ask someone to help you measure. Stand straight but relaxed while being measured. You will receive the best results if the measurements are taken over underwear only.

Place the elastic bands around your bust, waist, abdomen, and hips. Keep the elastic bands on their correct places during the whole measuring process. Search carefully for the correct places of these bands. Hip elastic should be placed at the level where the hip circumference is greatest. Examine whether this is at the buttocks (7-8 inches/18-20 cm below the waist) or at the top of the thighs (10-12 inches/25-30 cm below the waist). Vertical measurements are taken from and to the bottom of the elastic bands. It is important to use the elastic bands throughout all measuring. Don't remove the elastic before all necessary measurements have been taken.

Do not tighten the measuring tape, as this will distort the measurements.

Except for pants' cuff circumference and skirt/dress length, all measurements are body measurements. DO NOT ADD ANY EASE to the measurements. The program does it for you. If you prefer to wear pants or skirts lower than your natural waist, take a second waist measurement at the location you want the waistband to fall. Make note of this second measurement for measurements 3, 12, 13, 17 and 18. For all other garments, you should use your natural waistline.

BE ESPECIALLY CAREFUL WHEN TAKING THE MEASUREMENTS WRITTEN IN RED. These are crucial for good fitting patterns. After you take all the measurements, take these important measurements again.

You can measure in either inches or centimeters. Make your measurements accurate to the nearest 1/4" or 1/2 cm

Name: _____ **Date:** _____

1	Neck Circumference: Measure around lowest part of neck, at the base.	_____
2	Bust Circumference: Marked with elastic. Measure around the fullest part of the chest, keeping the tape high at the back.	_____
3	Waist Circumference: Measure waist at the elastic tape	_____
4	Abdomen Circumference: Measured at the level where abdomen circumference is maximum.	_____
5	Hip Circumference: Measured over the largest part of your bottom/thighs (at elastic)	_____
6	Bust Span: Horizontal distance between bust apexes (also called bust bridge).	_____

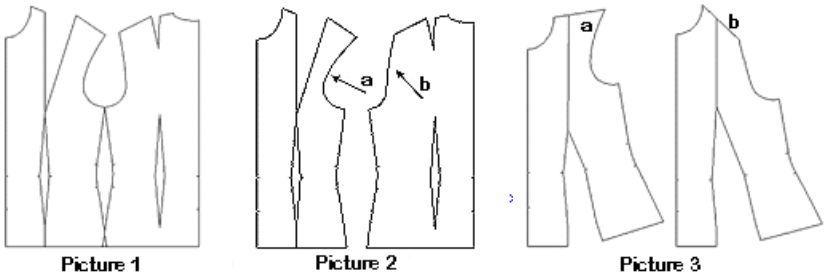
	Measure along bust elastic.	
7	Bust Height: Measure from apex of one breast, around back of neck, to apex of other breast. **Divide the result by 2**.	_____
8	Waist Height: Measure from lower edge of waist elastic, straight up to breast apex, around back of neck, to other breast apex, and down to lower edge of waist elastic. **Divide the result by 2**.	_____
9	Back Length: Put on a necklace or drape a piece of string around your neck. This marks the measurement location on the back of your neck. Measure from center of back neck to lower edge of waist elastic.	_____
10	Back Width: Hang your arms relaxed at your sides. The measurement is taken horizontally between shoulder blades (i.e. from sleeve seam to sleeve seam), from and to the point where your arm meets your body (but not to the armpit) about 4" (10cm) below the neck.	_____
11	Shoulder length: Measure from bottom of neck to shoulder tip. Shoulder tip is found when you raise the arm to horizontal position and feel where there is hollow/pit between shoulder and arm bones. Hold your arm horizontal, if necessary, to find this point.	_____
12	Waist-Abdomen: Measure vertically from lower edge of waist elastic to lower edge of abdomen elastic. Measure at front center.	_____
13	Waist-Hip: Measure vertically from lower edge of waist elastic to lower edge of hip elastic. Measure at the side.	_____
14	Biceps Circumference: Measure at the widest point of upper arm.	_____
15	Wrist Circumference: Measure over wrist bone.	_____
16	Overarm: Arm length from shoulder tip (as described above) to wrist. Bend arm slightly and measure over outside of elbow.	_____
17	Outside seam: Measure from waist over the outside curvature of the hip to the desired cuff length. This can be varied to create anything from shorts to full-length pants.	_____
18	Crotch Depth: Sit on unpadded bench or chair. Measure vertically from waist elastic to chair level on both sides, and use the longer measurement. Measure in a straight vertical line, not along the outside hip curve. (Crotch depth can also be figured from an old, well-fitting pair of pants. It is the difference between outside and inside length of pants.)	_____
	Desired cuff circumference (not ankle circumference). This may change from garment to garment.	_____
	Desired jacket length from waist elastic to hem. This may change from garment to garment.	_____
	Desired skirt/dress length from waist elastic to hem. This may change from garment to garment.	_____

IMPORTANT THINGS TO TAKE INTO CONSIDERATION WHEN MEASURING

Most important measurements are:

- waist height (from back neck over bust apex to front waist)
- back length (from back neck to back waist)
- back width (horizontal measurement between shoulder blades i.e. from sleeve seam to sleeve seam at a level of about one hand's width below neck)
- pants' crotch height (difference between pants' leg outside and inside length); this can be measured from a pair of old, well fitting pants

If one of these four measurements is wrong, the result may be a distorted pattern and it is difficult to figure what measurement is wrong. If some other measurement is wrong, you get either a too-tight or a too-loose garment and you can easily see what measurement to correct and to what direction.



Normally the pattern for basic sloper is more or less like picture 1. Front and back shoulders slope downwards to shoulder tip. Armscyes curve inward. Back armscye can be rather straight but should never bulge outward.

If the pattern looks like picture 2, i.e. front armscye curves strongly inward (a) and back armscye bulges outward (b), back width has been measured wrong and is too much. Take the back width measurement again. Please note that this measuring error causes the garment to be too loose at back and too tight at front. Therefore the situation cannot be corrected by only reducing width of back piece. The pattern must be redrawn using the correct back width measurement.

If waist height in relation to back length is wrong (refer to picture 3), the result is either a shoulder that slopes to wrong direction (3a), or a shoulder which is too steep (3b). If you measure waist height as instructed in PatternMaker measuring instructions i.e. double around back neck and divide the result by 2, there seldom is any error in waist height. Therefore the error usually is in back length.

If shoulder slopes in wrong direction, either: (a) back length is too much and if shoulder is too steep (b), back length is too little. Change back length 2-3 cm in the needed direction and see if it is enough to correct the situation. If it looks good, you can see at which point at the back of the neck the measurement should be taken to be correct.

If the subject stands in a very upright, military position with bust out and abdomen in, also waist height may be too much. Please make sure that the subject stands in a relaxed position (although not slouched) when she is being measured.

In some cases a steep shoulder may be due to the subject's body shape. This is the case if the subject has a very prominent bust. And conversely, if a subject has a very flat bust and/or a very round back, the shoulder can be rather straight.

Thus, there are cases, where the patterns are all right even if they look "odd". When the patterns are drawn according to a person's own measurements, they should not be compared with patterns drawn according to "normal" or "average" measurements. If you are not sure of the measurements taken, you have a very good and simple way to check them: sew a muslin with the basic bodice patterns. If it fits on the subject, you can be sure that all other garments sewn with Leena's patterns will fit well.

If you get an error message:

value out of range in line …
coord (32,33,sqrt(op*op-oke*oke),-oke);

it means there is a measuring error so drastic that the program is unable to draw the patterns at all. Front shoulder does not meet armscye line. Then either back length is too little or waist height too much. It may also be that shoulder length has some influence: shoulder length may be too short.

Also, in some other cases there may be reason for checking shoulder length measurement. If shoulder is too short, there will be a corner inward where front and back shoulder meet at shoulder tip and vice versa.

Setting up a measurement table

Set up a measurement table by selecting "Create Measurements" from the **Settings** menu.

- Each designer provides a "master measurement table" that acts as a template, indicating which body measurements are required for his or her designs.
- Select the **.MMT** file provided by the designer whose macro you are planning to use (the name of this file will be provided in your macro instructions).
- Enter your name at the top, and replace the default numbers with your own measurements.
- Save the table. Your new table is saved with an **.MTB** extension, so you can never accidentally overwrite the original template file.

See also:

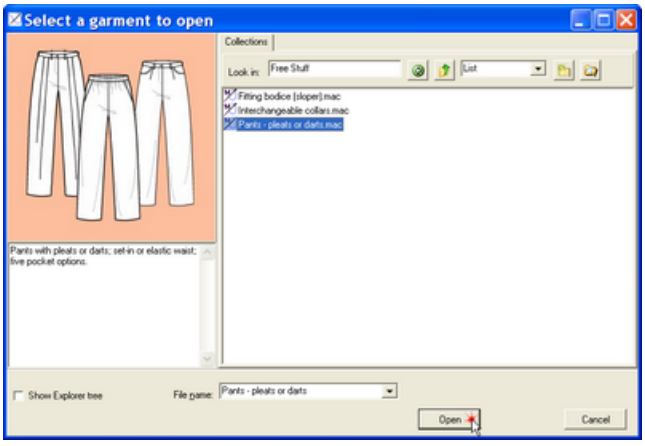
CREATE MEASUREMENT TABLE command

Use your measurement table in a macro

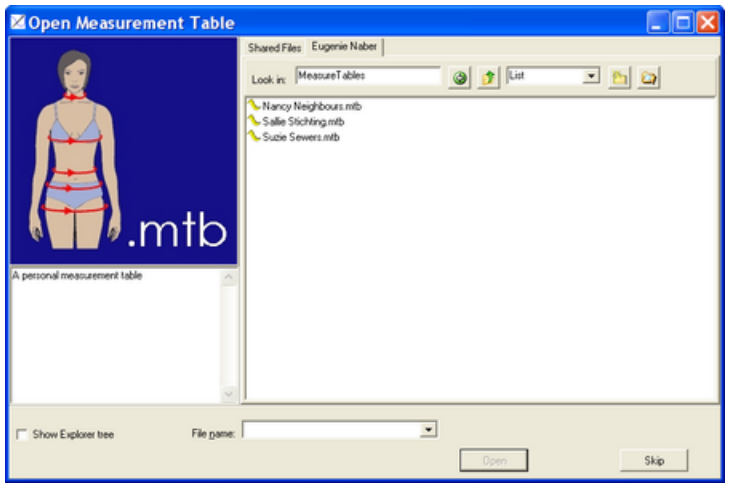
- Click on the "MAC" icon

The **Macro** LaunchPad opens.

- Choose the designer *Leena* and the collection *Free Stuff*.
- For this example, we'll use the free Ladies' pants pattern. Select the file called "Pants - pleats or darts" and click the "Open" button.



- This will launch the pattern. As the macro runs, you will be asked to select various garment options. For this example, it doesn't matter what options you choose; just click the "Next" button to move through the choices.
- At the end of the style options, the **Measurement** LaunchPad opens. This is where you select the measurement table you want to use.



- The measurements within the table will be "plugged into" the macro as it continues to run.

Too many measurements?

If the measurement table contains more measurements than are needed (as in this example with the pants), the extra measurements are simply ignored.

Not enough measurements?

Some macros will display a measurements dialog box even if you have used a measurement table. These are garment options that depend on numbers other than body measurements, such as the length of pant legs, or the flare of a skirt. These options can change from garment to garment, while the body measurements remain the same.

Changing a saved measurement table

If you need to make changes to a measurement table, use the "Edit Measurements" command on the **Settings** menu.

- An Open File dialog box will appear. The files are automatically filtered to show only the **.MTB** files.
- Select the table you wish to edit, and click the "Open" button.
- The table opens with the existing numbers.
- Change the numbers that need to be modified, and then click the "OK" button. The table is saved with the changes.

When you click "OK," your changes are automatically saved to the same table. If you want a second table with the new measurements, copy the measurement table first, then edit the new copy.

See also:

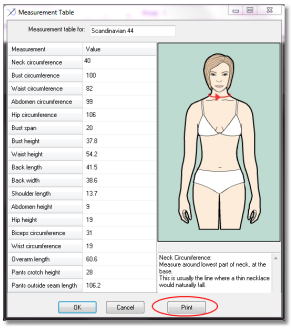
EDIT MEASUREMENT TABLE command

COPY MEASUREMENT TABLE command

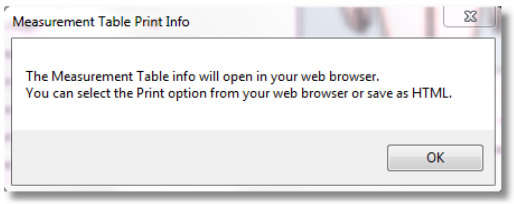
Print a measurement table

It is possible to print out your measurements from the measurement table. You can also save your measurements in a .**HTML** extension, which can be opened afterward in for instance Excel.

When you create or edit/copy a measurement table a button Print will show at the bottom in the Measurement Table Form.



When you click at this button a message will appear about the printing.


Measurement Table Print Info
The Measurement Table info will open in your web browser.
You can select the Print option from your web browser or save as HTML.
OK

Your web browser will open and you can print out the measurements by selecting the **Print Option** in your webbrowser.

You can also select the **Save as** option in your webbrowser and scroll for the desired folder where you want to save the measurements in a .HTML extension.

Afterwards you can open that .HTML file in a program like Excel and edit them.

3.2 Fabric yardage and pattern layout

Estimating Fabric Yardage

PatternMaker can help you with the calculations in determining yardage, but it is still up to you to make certain decisions, such as how many times each piece will be cut, which pieces need to be placed on a fold, and whether the fabric will be laid out in a single or double layer.

After you define a fabric width, the yardage grid will display a rectangular shape that is as wide as the number you entered. The yardage is represented in the drawing area by a red dotted/dashed line.

> *Note: Turn the yardage grid on and off with the <CTRL>+<F12> shortcut key. You can also change your Configuration settings to determine whether the grid is on or off by default when you open the program.*

Keep in mind that the initial arrangement of pattern pieces drawn by the macro will not represent a realistic fabric layout arrangement. You will need to use some of the editing commands to move the pattern pieces into a more practical arrangement.

The yardage grid will automatically change shape as you arrange pattern pieces and add objects to your drawing.

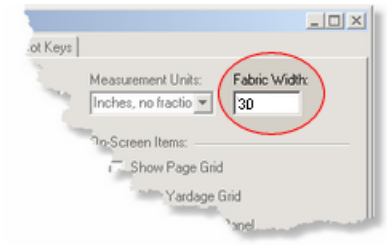
See also:

COPY command
MOVE command
ROTATE command

Define fabric width

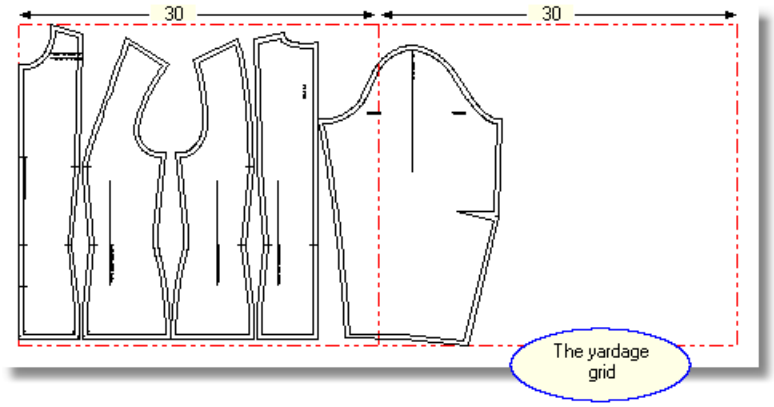
From the **Settings** menu, select "Configure Defaults," and then click on the *Program Settings* tab. In the field labeled "Bolt Width," enter the width of fabric you wish to use. If your pattern pieces will be laid out on double layers of fabric, enter half the fabric width in the Bolt Width field.

For example, if your 60" fabric will be folded in half, enter "30" for the bolt width.



Hint: Try your pattern layout with various bolt widths to see which gives you the best result.

After you define a fabric width, the yardage grid will display a rectangular shape that is as wide as the number you entered. The yardage grid is represented in the drawing area by a red dotted/dashed line.
Turn the yardage grid on and off with the Hot Key <CTRL>+<F12> or use the check box on the *Program Settings* tab of the Configure form (found on the **Settings** menu).



Arrange pattern layout

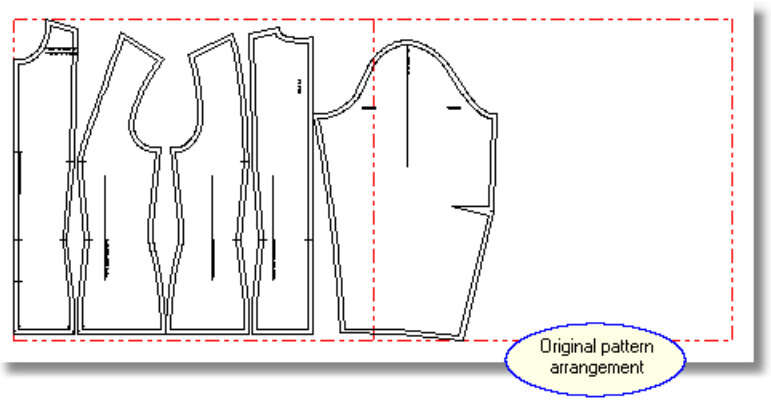
Keep in mind that the initial arrangement of pattern pieces drawn by the macro will not represent a realistic fabric layout arrangement. Some pieces may overlap, and you will almost certainly find that one or more pieces extend past the first width of fabric.

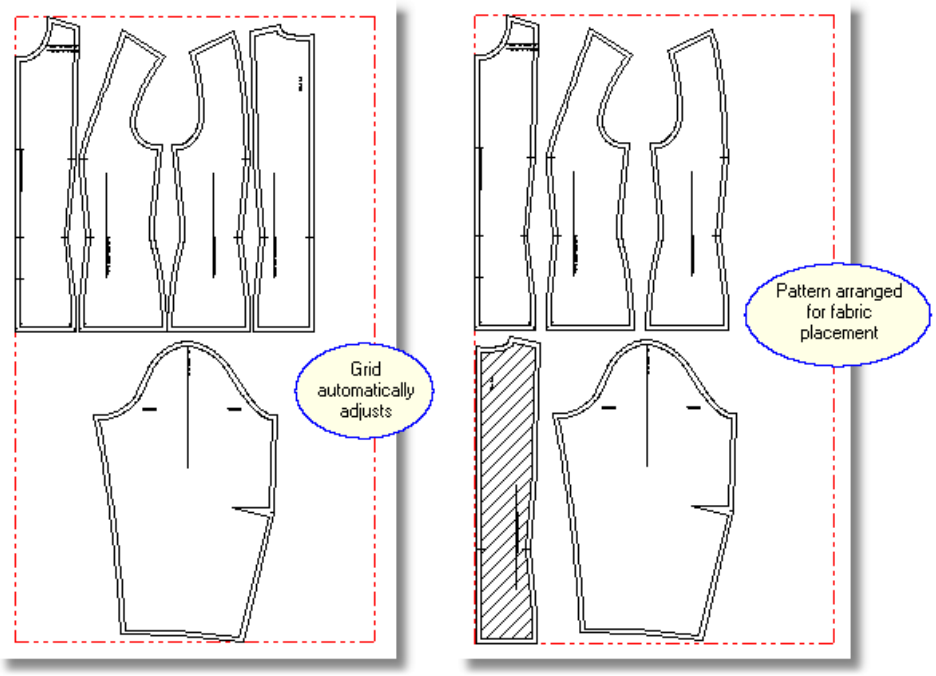
Try these techniques to come up with an arrangement that works:

- Use the MOVE command to move all pieces into one "column" of fabric.

- Use the FLIP commands to reverse the orientation of pieces as necessary.

Arrange your pattern pieces so that they fill one "width" and extend downward. The yardage grid will automatically change shape as you arrange pieces and add objects to your drawing.





Check the yardage indicator on the status bar to keep track of your fabric yardage.

3.3 Printing and assembling the pattern

How do you print a full-size pattern from just a desktop printer? It's simple! If the paper in your printer is too small to print an entire pattern, PatternMaker automatically breaks up the pattern into multiple pages.

Every page has alignment marks in the corners, to help you match the sheets together. Arrange the pages in rows and columns, and you have your pattern!

PatternMaker will work with any printing device, including ink-jet printers, laser printers, ink-jet or pen plotters, and even programs such as WinFax.

Keep in mind that the appearance of your printed pattern will vary slightly, depending on the capabilities of your printer. For instance, some printers only print black and white. Dotted lines may vary from printer to printer. Fill patterns also vary from printer to printer. PatternMaker attempts to make identical outputs on all printers, but this is not always possible.

It should, however, be possible to assure that the patterns are always the same size, and very similar in appearance.

Printing Overview

When you have a drawing on the screen that you want to print, begin with these simple steps:

Select your printer:

Select "Print Setup" from the **File** menu. From the drop-down list, select the printer you want to use. If you want to install a new printer, you must do so prior to this step. (See your printer manual or Windows manual for details on how to do this.) When you select a printer, your choice stays in effect for your entire PatternMaker session.

Decide what you want to print:

- *Whole Drawing* – Use the PRINT command to print all the visible objects in your drawing
- *Selected Objects* – Use PRINT SELECT to print only certain objects
- *Selected Area* – Use PRINT REGION to print a rectangular-shaped section of the drawing

Preview the print job:

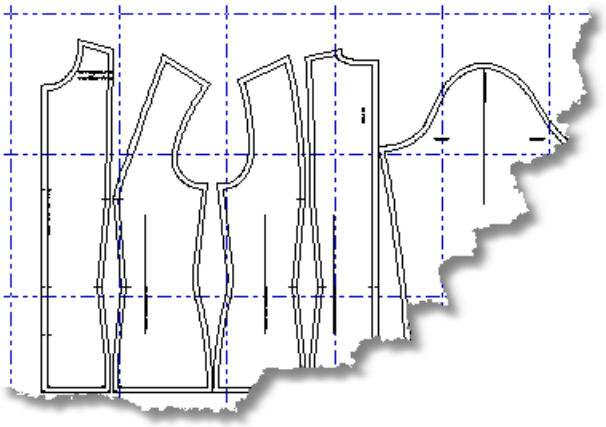
Continue...

Preview

Page layout grid

The page layout grid, shown as blue dashed lines, shows how your pattern pieces will be positioned on the sheets of paper when the pattern is printed. If a critical element (such as a grainline or notch) falls on a page intersection, you will know ahead of time that you should move the piece to avoid this situation. You can also use this grid to arrange your pattern pieces to make the most efficient use of paper.

Use the MOVE, ROTATE and other editing commands to move the pieces to the best position.



The page grid is automatically sized to represent the printable area of your paper. These grid blocks represent sheets of paper arranged in rows and columns. The lines will change if you change your paper size, or if you switch from portrait to landscape orientation. The printable area is determined by the paper size you are using and the abilities of your printer.

You can turn this grid off and on with the <F12> shortcut key, and you can change your Configuration settings to determine whether the grid is on or off by default when you open the program.

See also:

TOGGLE PAGE GRID command

Configure Program Options: Program Settings

Tutorial: Arranging a pattern for printing

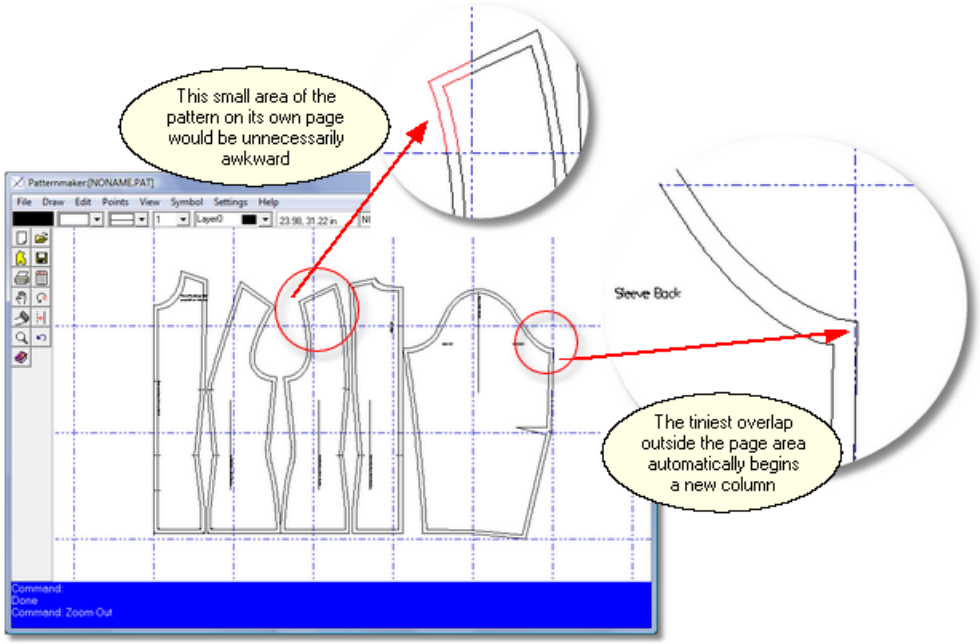
Skills: Page layout grid, MOVE command, ZOOM commands

You already know that you have to tape together the pages that you print. And some patterns might have a lot of pages. But you can make the job easier by taking a few minutes before printing to examine the layout of the pattern pieces on the screen.

Remember that the specific layout you see will depend on the garment and measurements you use, but we'll use the default measurements of the Fitting Bodice for this example.

Steps:

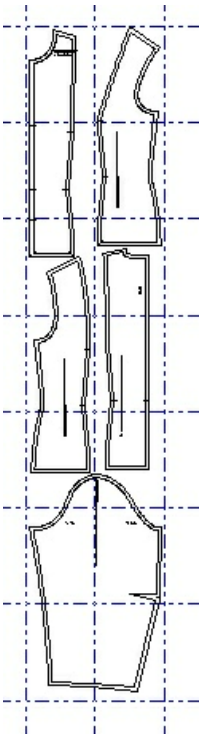
1. Run the Fitting Bodice macro.
2. Turn on the page layout grid (<F12>).
3. Check for possible problems:
   - small sections of a piece extending onto a new page
   - darts or text on a page seam line
4. Use the MOVE command

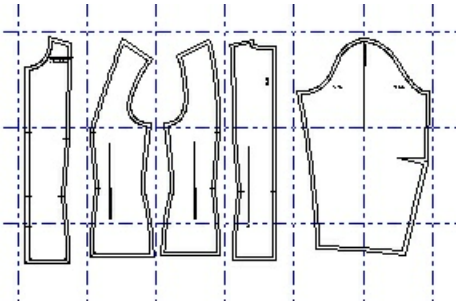

This small area of the pattern on its own page would be unnecessarily awkward
Sleeve Back
The tiniest overlap outside the page area automatically begins a new column

Move the patterns at the page grid, using the <HOME> and <END> to zoom in and out.

It is possible to move the patterns around the page grid that the amount of pages that have to be put together is less.
Here are some possibilities of layouts:

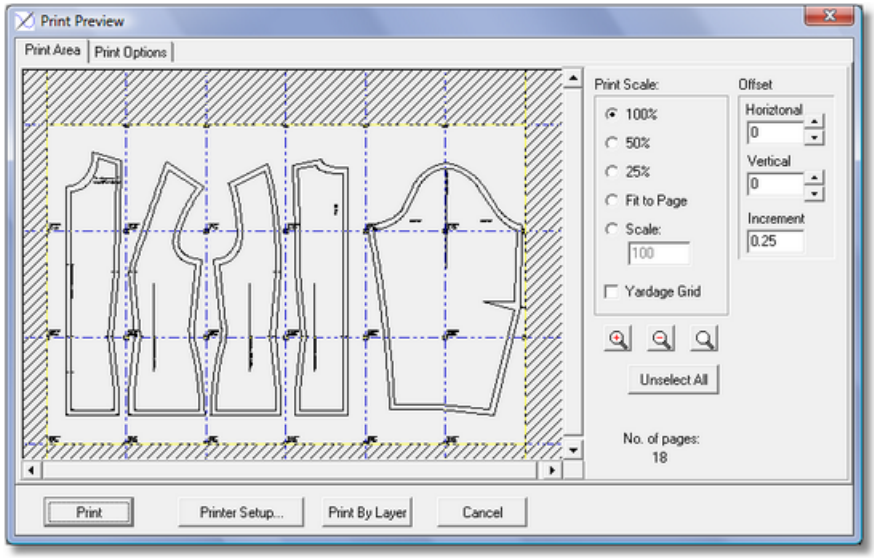
In 2 columns under each other: **Each pattern at a separate column:**





Print Preview

When you select any of the the "Print" commands, the Print Preview window opens automatically.



The blue dotted lines correspond to the page grid in your drawing area (see TOGGLE PAGE GRID). The print Preview shows you how many pages are necessary to print the entire pattern.

In the Print Preview window you can:

print one specific pattern piece

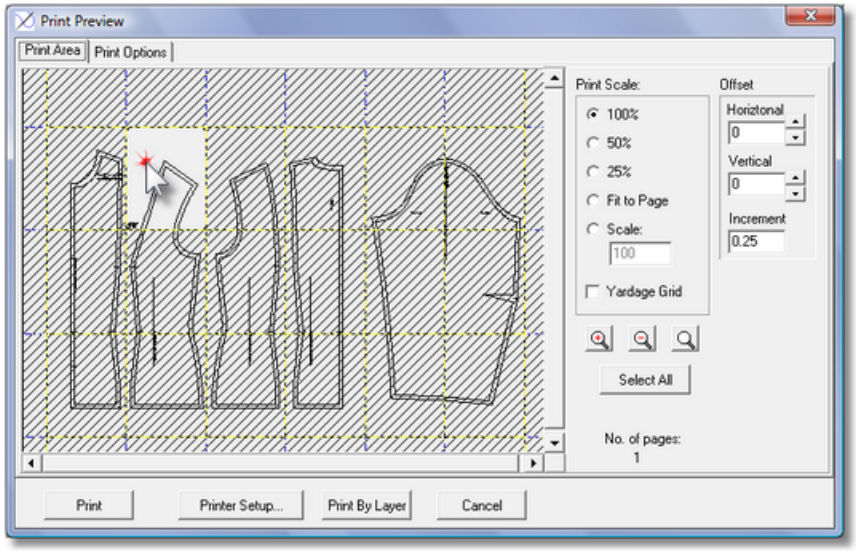
print specific sheets of paper

print a scaled pattern

print a pattern layout diagram

Select/unselect pages to print

Unshaded pages will be printed; shaded pages are not printed. Click on a specific page to switch between selected and unselected.

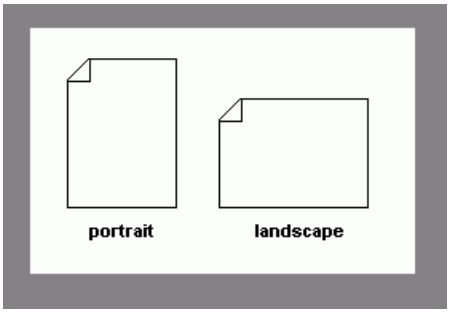


Notice how the "Select All" button toggles to "Unselect All" when you click it.

Print setup options

If you don't like what you see in the Preview window, there are several things you can do:

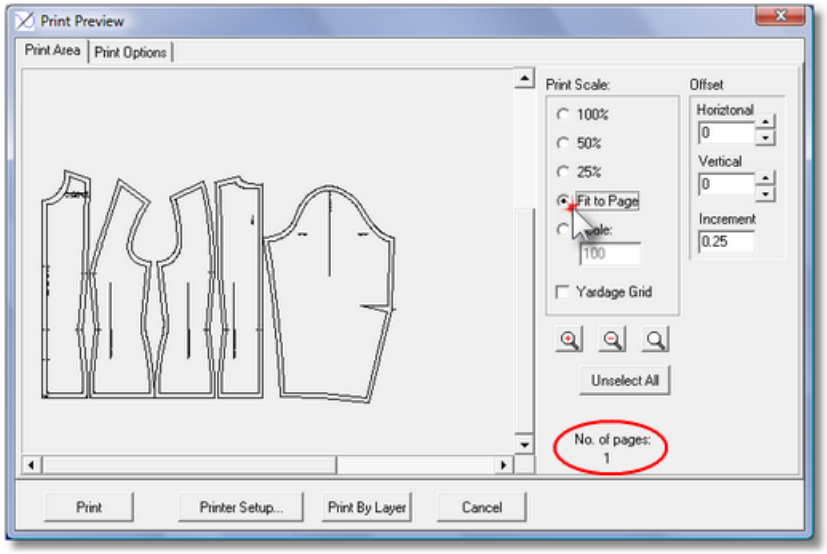
- Move the pieces in the drawing window. Use the Page Grid (<F12>) to help with the arrangement.
- Switch to a different printer, which may offer different paper-handling capabilities.
- Change your printer from Portrait to Landscape mode



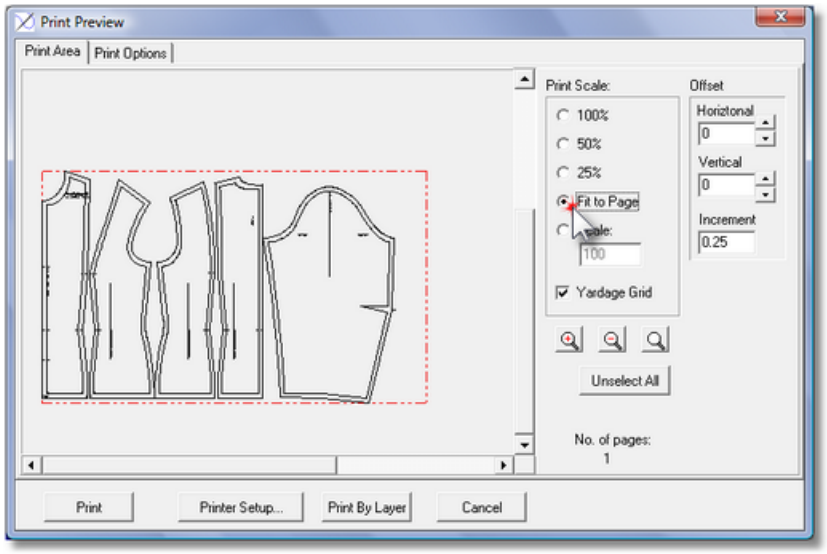
You can access Print Setup by using the button on the Print Preview screen, or directly from the **File** menu.

Printing to a single page

This feature automatically reduces the entire drawing to the size of one printed page and prints it.



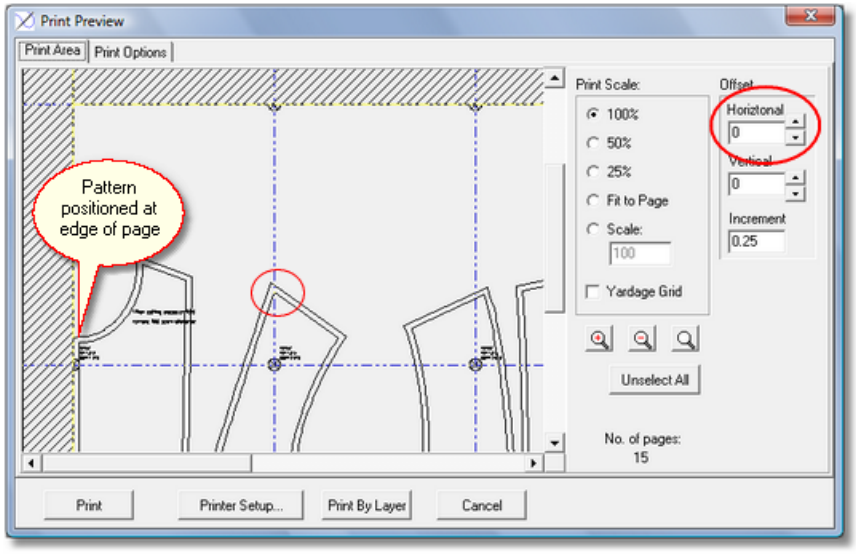
You can also choose to include the yardage grid in your printout. This gives you a handy pattern layout diagram to file with your pattern or take with you to the fabric store.



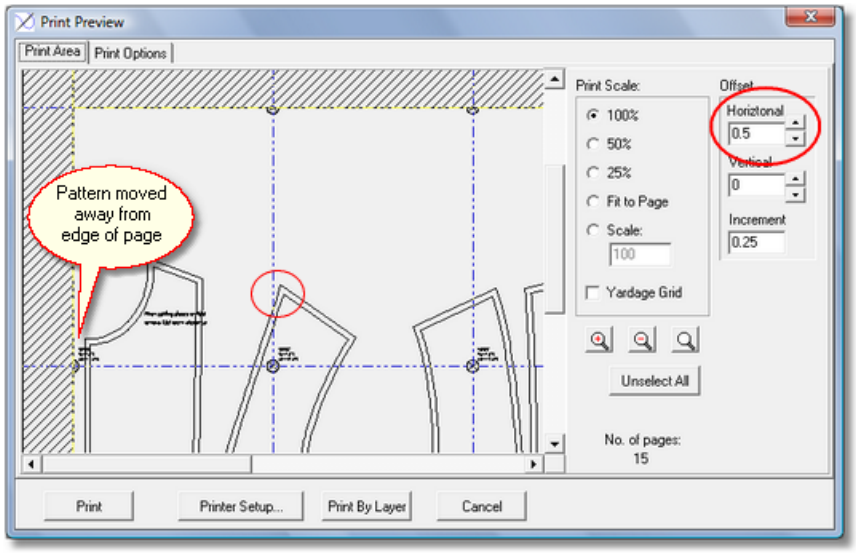
Print offset settings

The Print Preview window has horizontal and/or vertical offset options that can be used to adjust the position of the pattern on the printed page in small increments.

If you are simply printing your pattern at full size, you can use the page layout grid in the main drawing window to move pieces around before you get to the Print Preview window. However, if you use the print scale options in the preview window, you might find that you need to adjust the position of the pieces slightly to get an important area off a page intersection.



Original position of pattern



Position of pattern using horizontal offset

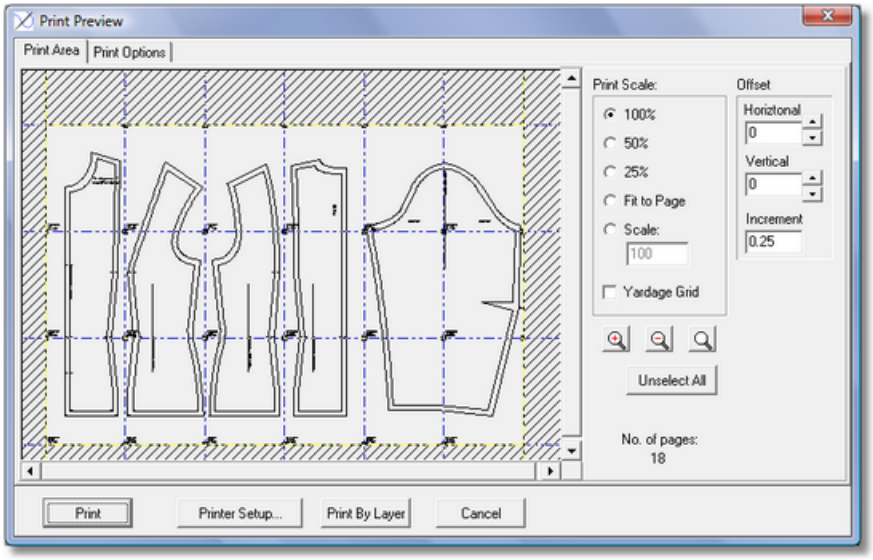
The numbers represent the measurement units you're using -- either inches or centimeters. Click the up and down arrow buttons to change the offset amount. Each click changes the number by the increment in the lower "increment" field.

Note: These offset options do not affect the position of your pattern in the main drawing area. This feature only changes the printed output.

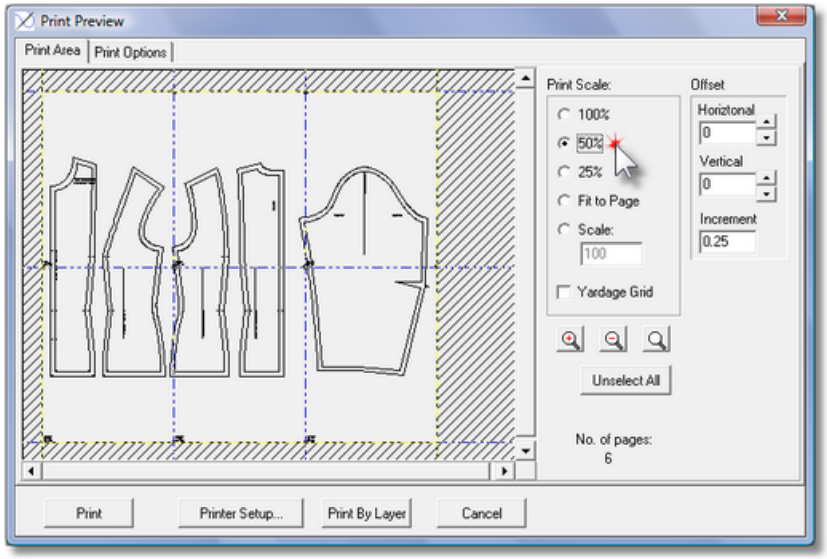
Print scaled pattern

Sometimes you might want to print a half-scale or quarter-scale pattern, for testing or some other special purpose. The Print Preview window gives you a very simple way to accomplish this.

When you first enter the Print Preview window, your pattern is shown at full size:



Select the print scale you want to use. You can choose one of the standard scale options or type your own number.

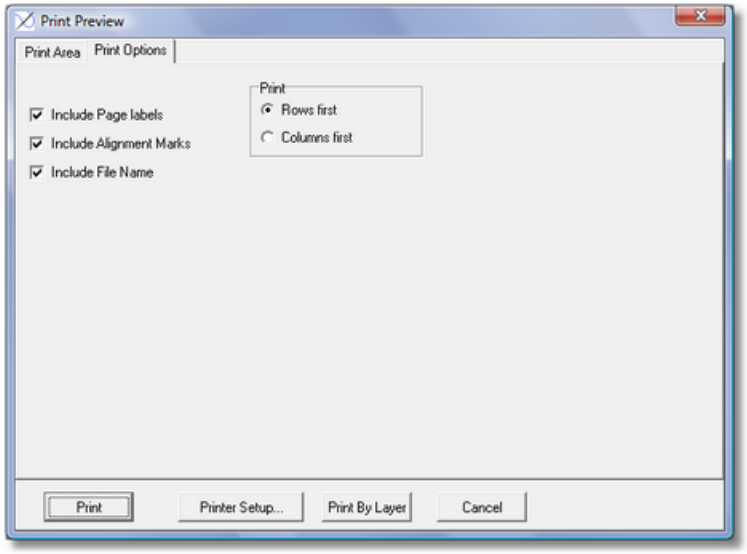


The page grid lines will change to reflect the new size of the pattern pieces.

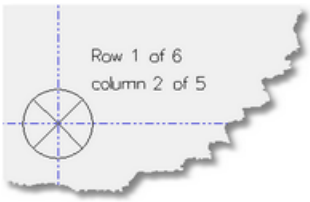
Note: These scale options do not affect the size of your pattern in any way. This feature only changes the printed size.

Print options

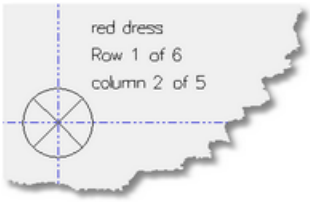
On this part of the form you can choose certain things about the appearance of your pattern printout.



By default, each printed page has a label in the lower left corner, and alignment marks in each corner:



If the file has already been saved, the file name is also printed:



You can use the check boxes to enable/ disable the print options in various combinations...

...or disable all the options (although turning off the alignment marks is not recommended).

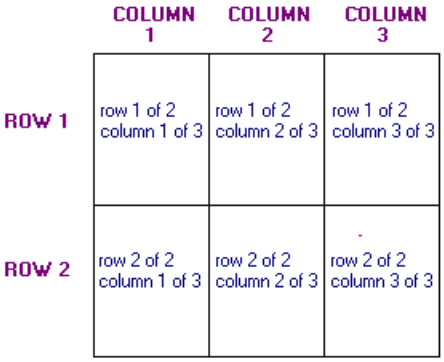
If you have a printer that can use banner or continuous-feed paper, you may find it convenient to print column-by-column, rather than row-by-row (note how the result will change if you switch from landscape to portrait orientation).

If you use a large format printer and you use the cut printed area option (the paper will be cut automatically after the last pattern is printed) it could be necessary to put off the label, alignment marks and file name. PatternMaker will print them at the bottom of each page, so they will conflict with the cut printed area option.

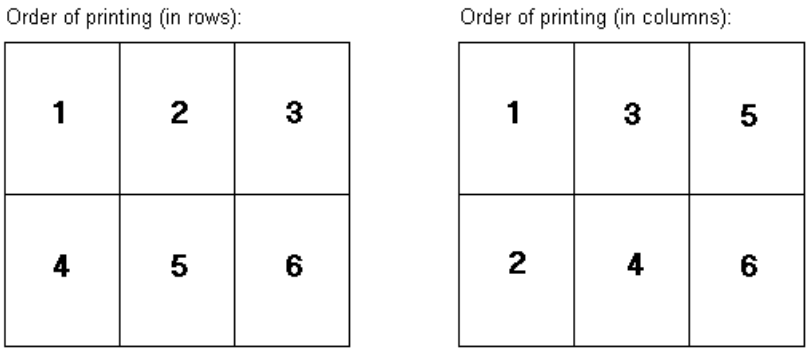
Putting pages together

Rows/Columns:

Each page that you print can be labeled, if you so choose, with alignment marks and row/column indicators. Together, they help you assemble your multi-page pattern quickly and easily. The name of the file being printed is also included. The row and column indicators tell you where a particular sheet of paper should be placed in the layout. Rows run across the drawing from left to right, and columns run from top to bottom.


COLUMN 1
COLUMN 2
COLUMN 3
ROW 1
row 1 of 2 column 1 of 3
row 1 of 2 column 2 of 3
row 1 of 2 column 3 of 3
ROW 2
row 2 of 2 column 1 of 3
row 2 of 2 column 2 of 3
row 2 of 2 column 3 of 3

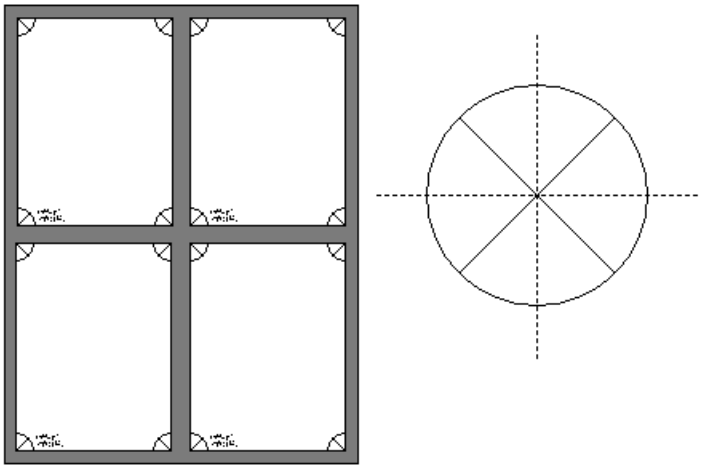
The pages are printed in order (either in rows or in columns -- see illustration below), so if you assemble them straight from the printer, you will find that it is an easy task to keep them organized. Align the pages as described below, and tape them together. It is better to have too much tape than too little, but you must at least apply tape at the points where the border of a pattern piece crosses from one page to another.



Of course, if you are using a plotter, or a printer that uses continuous-feed paper, you will have much less taping to do.

Aligning Pages:

Each page will have small marks in the corners for alignment (see illustration below left).



Each corner of the page represents one-quarter of a circle. Put the corners together with the adjoining pages so that each four-page intersection forms a circle with an "X" inside. Every four-page intersection should resemble the illustration (above right).

If you choose to have the pages labeled (the default is Yes), they will be labeled with the file name, row and column number so you will be able to assemble them easily.

See Commands Reference:

PRINT command

PRINT SELECT command

PRINT REGION command

Drawing and editing

4.1 Working with objects

How do you create a pattern with PatternMaker?

You can open an existing file containing a drawing, or you can use a pre-designed pattern to draw it for you.

But the way to create your own patterns, or to edit an existing one, is to use PatternMaker's many drawing commands to make new objects. These commands are designed to allow you to do the same things you would do in creating a pattern on paper:
to "trace" an existing pattern with a digitizing pad, to measure distances and draft shapes to certain measurements, and so forth.

Types of Objects

Your PatternMaker drawing is made up of objects. For example, a bodice piece outline is an object, the arrow showing the grain line is an object, and the label that says "Front Bodice" is yet another object. PatternMaker handles objects slightly differently than most CAD programs, but you should find them easy to understand.

Each object is made of one or more points. This manual will usually refer to a point as a vertex. For example, if the object is a triangle, it will have three vertices – one at each corner. Objects have colors and other attributes, too, depending on the type of object. Many of these attributes can be changed with the CHANGE command or the various commands in the **Settings** menu (see Configure/Configure Defaults).

Each vertex may or may not have a grading arrow assigned to it. Grading and grading arrows are explained in Advanced Features: Grading Overview.

> ***Hint:*** *The current layer must be turned ON for you to draw anything. If all of the* ***Draw*** *commands are inactive, and your version of PatternMaker is supposed to offer them, use the LAYER command to make sure the current layer is turned on.*

PatternMaker has the following types of objects:

Text object

A text object is words, numbers, etc. that you can use as a label in your drawing. Text labels can be very useful in printed patterns, to identify pieces, pattern, material requirements, and the author/designer.

A text object has one vertex, which gives the location of the lower left corner of the text. That is the spot to click on when you want to move a text object.

The arrows show the single vertex of a Text object.

You can print text in any size, at any orientation or angle, and in any TrueType font (typeface) that is installed on your computer.

Your PatternMaker installation includes a built-in font called "PatternMaker." This is the default font that will be used

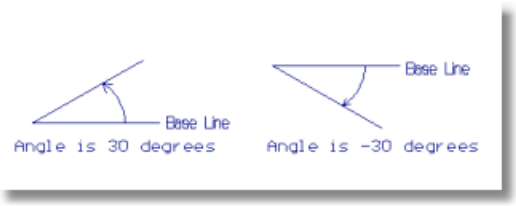
until you change to a different font, and it appears in the font drop-down box on the Status Bar (however, the PatternMaker font is not available in other Windows applications). The PatternMaker font draws text as if it were written with a single stroke of a pen (see example below.) All other Windows fonts will be drawn as an outline of each letter. Also, some printers may print the fonts slightly differently than they appear on the screen. Be sure to print a few samples of TrueType fonts before you use a lot of them.

This is the default PatternMaker font

This is Arial

This is Times New Roman

When you draw a text item, the computer will ask for a location, size, rotation angle and for the text to be printed. The size is the height in inches. The angle is measured in degrees, going counterclockwise. For instance, 0 degrees is horizontal, and 90 degrees is vertical, reading upwards.



> ***Hint:*** *If you want to have multiple lines of text, make several text objects. One of the easiest ways to line them up is to turn on Snap to Grid and then line up the text on grid points. For example, if you are drawing text that is ¼" tall, set the grid to ½", or .5, which will then be the spacing for your text items.*

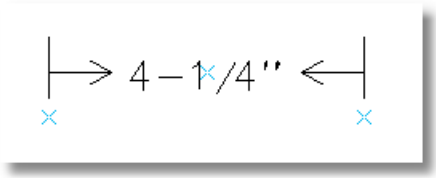
See also:

TEXT command

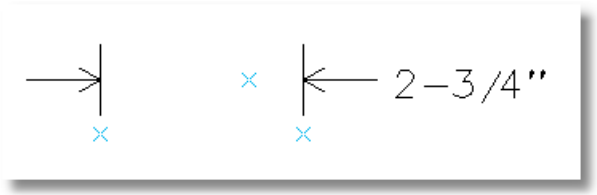
Dimension object

A dimension, or "dim," object is an engineering-style dimension line, showing the distance between two points. This consists of lines and arrows indicating the two points at which the measurement is taken, and the distance between the points.

A dimension object has three vertices: one at each end of the space you are measuring, and one to indicate where to print the numbers. If you move one end of a dimension line, the distance will automatically update.



Dimension object showing three vertices



The numbers appear outside the dimension lines if the space inside is too small

See also:

DIM command

Set measurement units

Symbol object

A symbol insertion looks like a collection of other types of objects, but it is really a copy of objects that are stored elsewhere in PatternMaker's memory. Therefore, you can't move or edit the objects in an insertion in the usual way. A symbol insertion has one vertex: the insertion point.

> *Note: Usually the insertion point is close to where the insertion is drawn, but it doesn't have to be. If you can't tell where the insertion point is, use* <F5> *(*SHOW VERTEX*) to turn on the points*.

Insertions can be rotated and made larger or smaller, but otherwise an insertion can't be changed except by changing the symbol that it is based on.
For a full explanation of symbols and insertions, see Using symbols & libraries.

Polygon object

Polygons are the basic building blocks of your drawing. Everything that isn't a text, dimension, or symbol object is a polygon. For example, circles, rectangles, and lines are all polygons. A polygon can have any number of vertices. The vertices are connected with straight lines or arcs to form a shape. To change a polygon, you can add and remove points, or change its shape by moving some points.

A polygon can be open or closed. An open polygon is a (possibly long and crooked) line. A closed polygon is a shape with an inside and an outside. When you draw a pattern, the pieces you will actually cut out will be closed polygons. Other items, such as grain lines, may be open polygons.

See also:

POLY command

Drawing an object

The **Draw** menu contains the names of several different objects that you can add to your drawing. Some, such as Line, Circle, and Offset, are actually polygons themselves, but they have separate command names to make them easier to access and create.

The Polygon is the most common type of object that you will use. This is the basic order of events in drawing a polygon:

- Select the POLY command
- Enter some points
- Choose options from the Poly sub-menu
- Enter more points
- Choose "Done" from the Poly sub-menu

See the POLY command for detailed instructions on drawing polygons.

Editing objects

The Edit commands all follow a similar routine: first select a command, then give the computer the information it needs to execute the command.
For instance, for the MOVE command, here's what you do:

1. Select the MOVE command.
2. Tell it what to move.
3. Tell it where to move.

During steps 2 and 3, you are "in" the MOVE command. You can't give any other commands, except the Hot Key or icon commands, until you are out of the MOVE command. When you start another command, you will need to select a new set of objects.

Note on Commands and Objects:

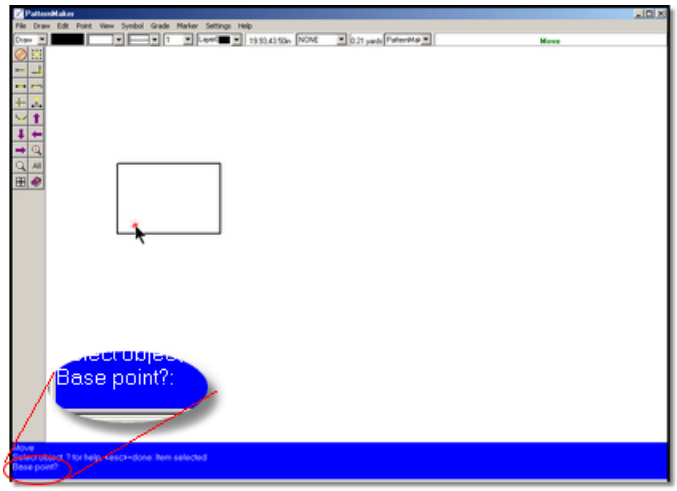
*In PatternMaker you always select **commands first** and then the objects they apply to.*

See also:

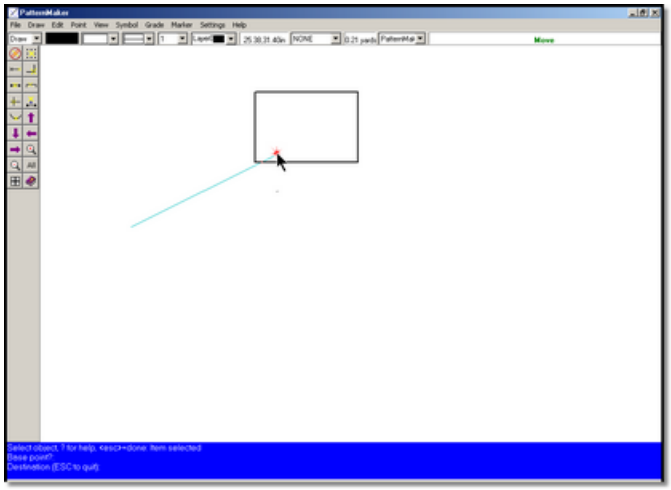
Activating a command

Base point and destination

Many commands will ask you to specify a "base point" and a "destination." The base point is like a handle that you use to carry the object(s). The destination is, of course, where you want the object(s) to end up.
The base point and the destination are the reference points used for performing the command. For example, for the MOVE command, the distance the selected objects will be moved is equal to the distance between the base point and the destination point.



Note: It usually doesn't matter what spot you pick for the base point. Just click wherever it's convenient. But if you want to start the Move from a certain point use a Snap Endpoint or another Snap command. Select Snap Endpoint from the Status bar and select as Base.point the exact point you want to start from.



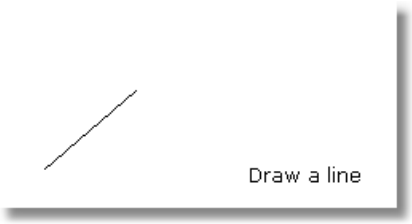
The blue line indicates the distance that the object is moved

Move the mouse around until the object is where you want it.

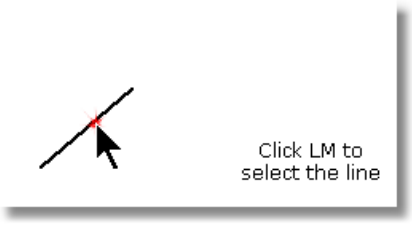
Using typed coordinates is especially useful for specifying the destination point. Sometimes it doesn't matter how far you move something – you just want it out of your way. But if you need to move an object a certain distance, you can use Relative Coordinates to do it accurately. If you want to move the rectangle 5 inches to the right type as destination on your keyboard r5,0 <ENTER> . The rectangle will be moved 5 inches to the right.

Example: the MOVE command

1. Draw a line using the LINE command in the **Draw** menu, or using the "Line" icon in the icon area. Try to make the line look something like this:

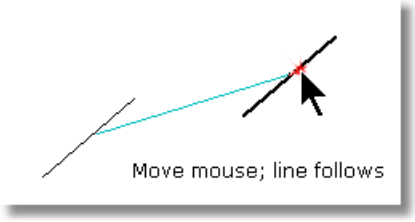


2. Now select "Move" from the **Edit** menu. The bottom line of the command area will say: `Select object, ? for help, <ESC> = done:`
3. You can press <ESC> to cancel the command, or press <?> to get help. For now, answer this question by clicking on the line. It will highlight.

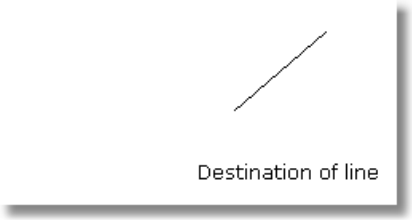


   The same prompt will be repeated, giving you a chance to select more than one object. This time, since you are done selecting objects, respond by clicking the right button of the mouse.
4. Now the computer will respond with a new question: `Base point?:` The base point is the "handle" you will use for moving the object. It is often convenient to carry a line by the midpoint, so click somewhere in the middle of the line you are moving.

5. After you click, the prompt line will say: `Destination:` Move the mouse around and you will see the line move.



6. Move the line around a bit. Notice the cyan (bluish) line that shows you how far the line has moved.
7. Click the left button again to place the line in a new position. The final result should look like this:



Note: You can also use typed coordinates in Step 6 to move the line a specific distance or at a specific angle. See X and Y coordinates for details.

4.2 Working with points

Points are the basis of all PatternMaker objects. You encounter points any time you draw or edit anything with PatternMaker, and also when you are selecting objects or vertices. You can enter points in any of the following ways:

Using a mouse:

After you activate a command, you can simply click in the drawing area to enter or select a point. Use the left mouse button (**LM**). This is the simplest way to enter data, but it may not be as accurate as you want.

Using a mouse with Snap modes:

Snaps are a way to make mouse inputs more precise. See Using Snap modes for more information.

Using typed coordinates:

You can indicate a point by using X/Y coordinates. See X and Y coordinates for more information.

Using a digitizer:

If you are using a digitizer, the puck can be used to enter points, just like a mouse.

You can switch back and forth between these methods at any time, even in the middle of a command.

Types of points

Whether a segment of a polygon is a straight line or a curve depends on the type of the point at the start of the segment. There are four types of points:

- **Line (L)**

  Ordinary points are connected by straight lines. In other words, a Line point is a corner of a polygon.

- **Arc start (X)**

  The beginning of an Xarc (see below).

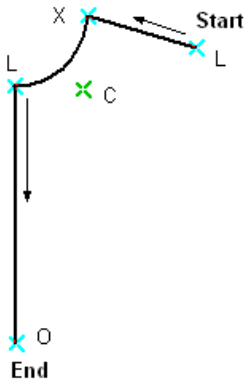
- **Arc corner (C)**

  This is the corner point, or control point, of an Xarc (see below). This point controls the shape and amount of curvature of the Xarc. If you use the MOVE VERTEX command to move a corner point, you will see how the arc changes shape.

  Since the corner point doesn't lie on the object, it will sometimes be difficult to tell exactly where the corner point is. Use the <F5> Hot Key to display the vertices if this happens.

- **Open (O)**

  An open point is the last point of an open polygon. Only the last point of a polygon can be of the Open type. This is how PatternMaker tells the difference between an open and a closed polygon.

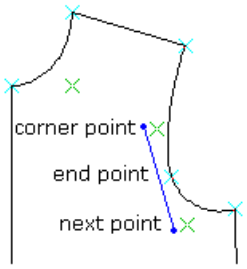


Drawing or editing curves

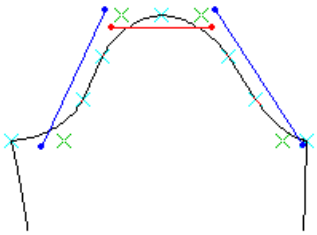
Xarcs are the way PatternMaker draws curves. While a line segment is determined by two points (start point and end point), an Xarc is determined by three points: the start point (type X), the corner point (type C), and the end point. The end point can be the start of a line, the start of another Xarc, or the end of the object.

The corner point determines the shape of an Xarc. If you draw an imaginary line from the corner point to one of the end points of the Xarc, the line will blend smoothly into the line of the Xarc (will be "tangent to" the line). This means that:

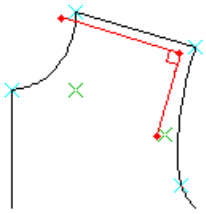
- If the corner point, the end point, and the next point after that all lie on a straight line, the Xarc will merge smoothly into the next segment of the object.



This is true whether the next segment is a straight line or another Xarc. A sleeve cap, for example, will consist of several curves that all need to merge smoothly:



- If the corner point, the end point, and the next point of the object form a right angle, then you will get a square corner where the arc meets the next segment of the object. This is the common procedure for curved lines such as arm and neck holes.



These two facts are important to keep in mind as you are adjusting the shapes of curves in your drawings.

> *Hint: If you can't get an Xarc to take the exact shape of the curve you want, such as for an arm hole, draw the curve as two or three Xarcs together.*

Editing points

The Point Edit commands are used on individual points of objects, rather than whole objects at a time. You can move, add, delete etc. The vertices don't all need to belong to the same object, and the rules are similar to the rules for selecting objects (see Selecting objects). The general order of events is:

1. Select a command (such as MOVE VERTEX).
2. Select the vertex or vertices to apply the command to.
3. Give PatternMaker any other information (for MOVE VERTEX, this would be first the point to move from, then the point to move to).

Base point and destination

Many commands will ask you to specify a "base point" and a "destination." The base point is like a handle that you use to carry the point(s). The destination is, of course, where you want the point(s) to end up. The base point and the destination are the reference points used for performing the command. For example, for the MOVE VERTEX command, the distance the selected points will be moved is equal to the distance between the base point and the destination point.

Note: It usually doesn't matter what spot you pick for the base point. Just click wherever it's convenient.

Using typed coordinates is especially useful for specifying the destination point. Sometimes it doesn't matter how far you move something – you just want it out of your way. But often you need to move an object a certain distance. Use Relative Coordinates to do this accurately.

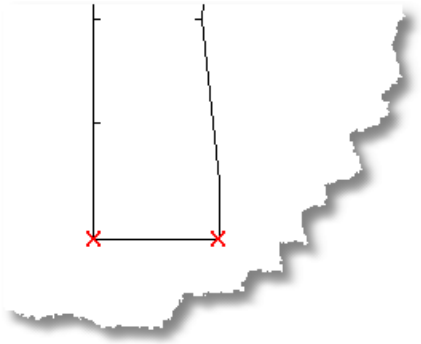
Example: the MOVE VERTEX command

1. Start out by running a macro (MACRO command). Select the designer Leena, then select the folder Free Stuff. Select the Fitting Bodice and choose the style "Dart to Shoulder". As a seamallowance fill in 0. The Fitting Bodice will be drawn by PatternMaker .
   Now we want to make the bodice longer, so we move the hemline downwards.
   Select the "Move Vertex" from the **Point** menu. The program will ask you for a point to be moved. The prompt says:

   ```
   Select point(s):
   ```

2. Select the bottom left corner of the bodice by clicking **LM** on it. Then select the bottom right corner by clicking on it also. The program will highlight both points.

   Your drawing will look something like this:

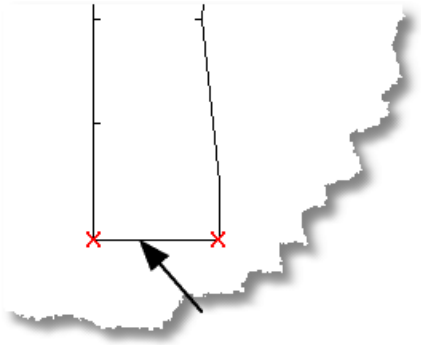
   

   The 'x' marks on the two corners mean these points have been selected. Click **RM** to indicate that you are finished selecting points. Select from The Right Mouse context menu "Done selecting".

3. The computer will now ask:

   ```
   Base point:
   ```

   This means it wants to know where to start the move. Click anywhere on the hemline of the bodice as shown below.

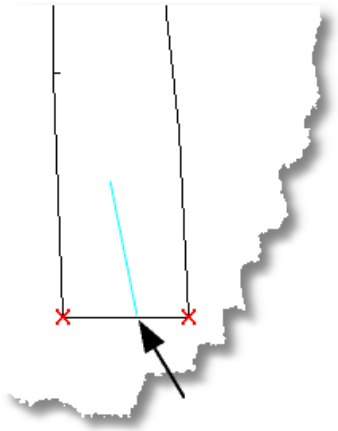


The computer responds by saying:

`Destination:`

4. Now move the mouse a little downwards. You will see the outline move with the mouse, distorting the shape of the bodice. A cyan (bluish) line appears, showing the distance of the move. When you get the points where you want them, click the mouse.

   Your shape should look something like this:



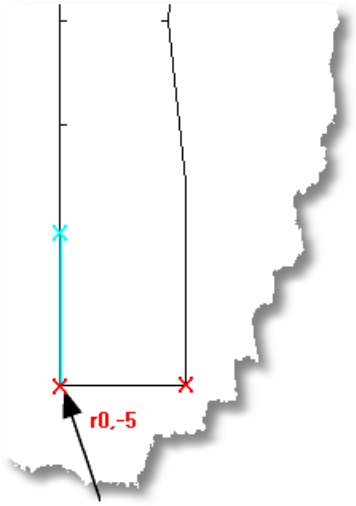
   You did move the hemline on sight.

5. If you wanted to move the hemline for instance 5 inches down then you have to type in the destination on your keyboard

   `Destination`: r0,-5 <ENTER>

   This means that you have moved the 2 selected points from the selected base point :
   X = 0 inches horizontal and Y = 5 inches downwards (is negative).

   Using the Snap Endpoint when you are selecting as Base point the left hemline point will make your work accurate.



See also: X and Y coordinates
Relative coordinates

Adjusting arc lengths

Use the Set/Measure Dist. function to adjust the length of a curve or a section of an object. You can select any two non-adjacent vertices of an object, and PatternMaker will give you the length of the section connecting them. You can adjust the length by typing in a new value for this distance. PatternMaker will move the vertices along the selected section to adjust the distance. The endpoints of the selected section will not move.

Example: Use Set/Measure Dist. to make sure that your armscyes match your sleeve caps. Remember to allow for seams and ease.

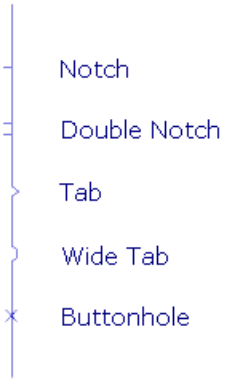
Note: Adjust armscyes, neck holes, and other curves with standard patternmaking methods. The MOVE VERTEX *command is very handy for this. Then use the* Set/Measure Dist *function to make fine adjustments to a curve.* Set/Measure Dist *works best for adjustments of ½ inch or less.*

Note: This command only works when you select a segment with at least three vertices. Therefore, you cannot use this command to adjust the length of a line with only two vertices (although you can still check the measurement).

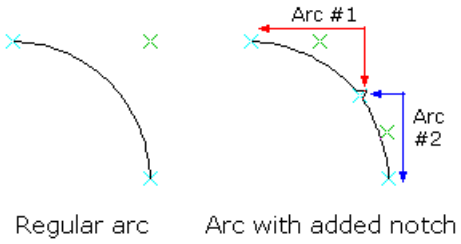
Notches and tabs

You can define certain points of your objects to be notches or tabs. Use them to show how to align two pieces when they are sewn together. A point that is a notch or tab is drawn differently, but it is treated the same as any other vertex for all other operations.

Here is what the notches and tabs look like. Notice that you can also use the Notch feature for marking buttonholes.



Use the NOTCH command to change an ordinary point into a notch, or ADD VERTEX to add a notch in a new location. You can only make a notch or tab where your object already has a vertex along its contour. You can't put a tab in the middle of an arc, for example, because the vertex lies away from the line. In this situation, use ADD VERTEX to place a vertex where the tab will go. The original curve will consist of two or more arcs drawn end-to-end.



Sometimes PatternMaker will draw a notch backwards because it isn't sure which is the inside of an object. If this happens, you can reverse the notch with the NOTCH DIR command.

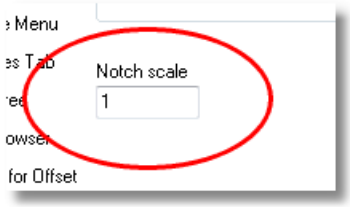
Notch scale

If you want the size of the notches changed in your drawing , you can set this in the Program Settings of Configure or Configure default.

Scale 1 means the default size of the notch.

Scale 2 means the notch is twice as big

Scale 0.5 means the notch is half so big as usual.



Changing the scale applies to **all the notches** in that file

See also:

- ADD VERTEX command
- NOTCH command
- NOTCH DIR command

Going Further

5.1 Customizing PatternMaker

This section covers some of the ways you can make PatternMaker work the way you want to work.

Main drawing window

There are many ways you can set up the main PatternMaker window in order to make it work effectively for you. Panels, grids, Hot Keys, and more can all be customized the way you want.

In Settings/Configure or Settings/Configure Defaults you can set the way you want to work and draw:

1. **Configure Defaults**: the settings you have made will be in effect **every time you start PatternMaker** or **open a new or saved file**
2. **Configure**: You can set drawing properties, viewing options, and program behaviors that will be in effect **on the opened file**.
   Some drawing options you can change immediately in the status bar on the screen. These changes will be visible in the Configure form.
   Some changes, you want to make to the settings have to be done in the Configure form itself, like background color.

Set measurement units

This setting selects the units of measurement, either inches or centimeters. If you select either of the metric displays (meters or centimeters), all PatternMaker input and output will be in centimeters. If you select any of the English units, all input and output will be in inches. To see which units are in use, look at the X-Y coordinates in the status bar.

When you change this setting, all Dimension objects are redrawn with the new units and the grid (if you're using it) is resized.

Procedure:

1. Click the mouse coordinates box on the Status Bar, or select "Configure" or "Configure Defaults" from the **Settings** menu to open the "Configure Options" form.

2. Choose one of the following options:

Option	Description	Example
inches, no fractions	The measurement is in inches, fractions are in decimal form. No " symbol is displayed.	18.375
inches	Measurement is in inches. Fractions are in decimal form.	18.375"
feet + inches	Fractional inches are written as fractions	1'6-3/8"
meters	The measurement is in meters	1.462 M
centimeters	The measurement is in centimeters	1462 cm

See also:

Configure/Configure Defaults

Set grid spacing

This setting adjusts the grid spacing. The spacing is measured in whatever units (inches or cm) you are using.

Procedure:

1. Select "Configure" or "Configure Defaults" from the Settings menu. The "Configure Options" form opens.
2. The "Alignment Grid" section displays the current spacing between grid points.

3. To change the grid spacing, you must turn the grid on. Type the number you want, and then click the "Add" button to return to the drawing screen.

See also:

Set measurement units

SNAP commands

TOGGLE GRID command

Configure/Configure Defaults

Show/hide Page Grid

The PAGE GRID option is accessed by a field on the *Program Settings* tab of the "Configure" or "Configure Defaults" form, found on the **Settings** menu.

This setting shows or hides the page layout grid. This is also an option on the **View** menu, or you can use the <F12> hot key.

The size of this grid is determined by the size of the paper you are using in your printer. It displays the actual printable area, not the paper size. A change of printer or a different paper size will affect the appearance of the page grid.

See also:

Page layout grid

PRINT command

Configure/Configure Defaults

Show/hide Yardage Grid

This option is accessed by a field on the *Program Settings* tab of the "Configure" or "Configure Defaults" form, found on the **Settings** menu.

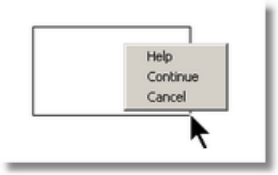
This setting toggles the yardage grid on and off. This can also be toggled with the <CTRL>+<F12> hot key.

See also:

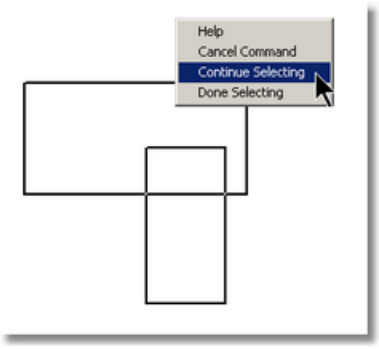
- Set fabric width
- Estimating Fabric Yardage
- Configure/Configure Defaults

Use Right Mouse menu

The Right Mouse menus provide guidance while you're getting used to the left-click/right-click circumstances in PatternMaker. If you accidentally right-click when you should left-click, the Right Mouse menu guides you toward the correct choice. You can also access Help for the selected command.



If you're using a command with just one step, such as a drawing command, the Right Mouse menu will let you either cancel the command or keep drawing.



If the command involves selecting things, the menu is slightly different. It will let you cancel the command, continue selecting, or indicate that you are done selecting.

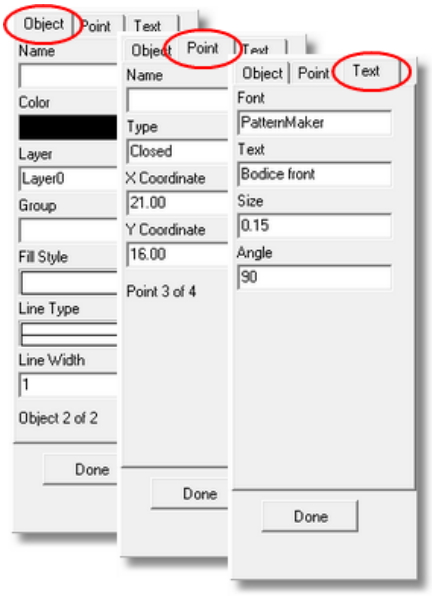
If you no longer want to use these Right Mouse menus, the control setting is available on the "Configure" or "Configure Defaults" form on the **Settings** menu.

See also:

Configure/Configure Defaults

Show/hide ID Object Panel

The ID Object panel provides information about objects, points, and text objects. Check this panel for information about something on the screen if you have several things near each other and can't tell them apart. Notice that the panel displays different information depending on which tab is selected.



You can turn on the ID Object Panel either from the "Configure" or "Configure Defaults" form or with a checkmark on the **View** menu.

See also:

ID OBJECT PANEL

Configure/Configure Defaults

Set fabric width

This option is accessed by a field on the *Program Set*tings tab of the "Configure" or "Configure Defaults" form, found on the **Settings** menu.

In the field labeled "Fabric Width," enter the width of fabric you wish to use. If your pattern pieces will be laid out on double layers of fabric, enter half the fabric width in the Bolt Width field.

Example: You are using 60" fabric, but intend to fold it in half for the fabric layout. Enter "30" for the bolt width.

See also:

Show/Hide Yardage Grid

Estimating Fabric Yardage

Configure/Configure Defaults

Set background drawing color

This setting changes the drawing area from white to black. The default is white, but you may find the colored vertices easier to see against a black background.

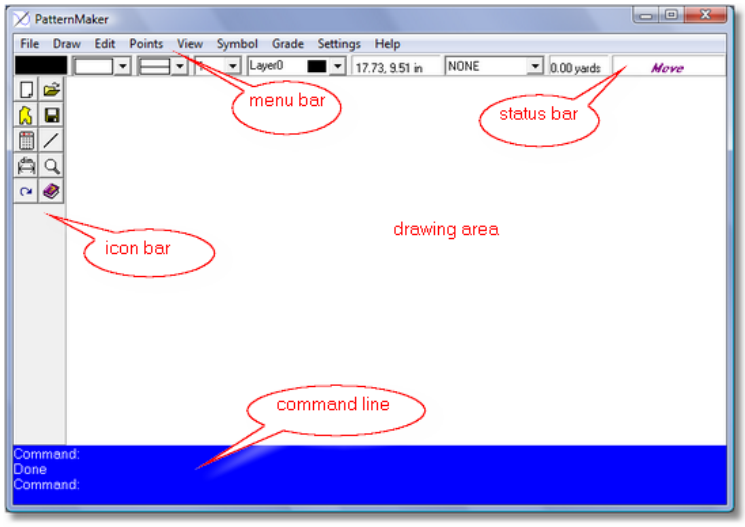
Select "Configure" or "Configure Defaults" from the **Settings** menu, then click the *Program Settings* tab. If you only see a few options on the form, click the "Advanced" button at the bottom. Then click in the "Use White Background" check box to turn this option on or off.

See also:

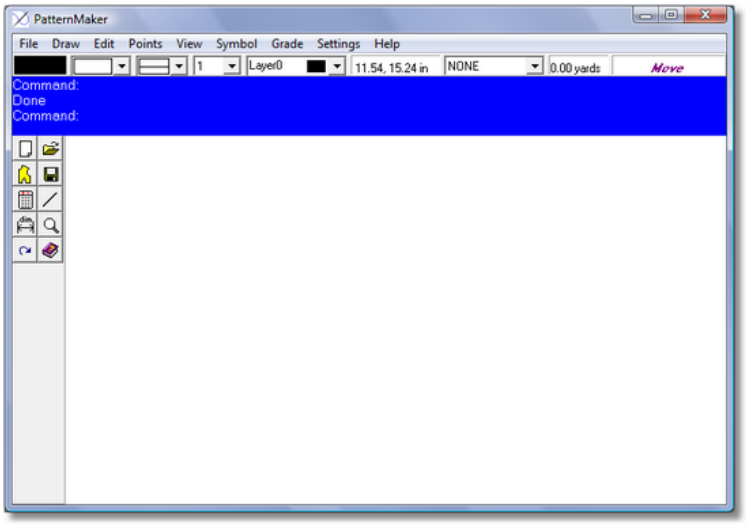
Configure/Configure Defaults

Moving the command line

The default configuration of PatternMaker has the blue command line positioned at the bottom of the screen:



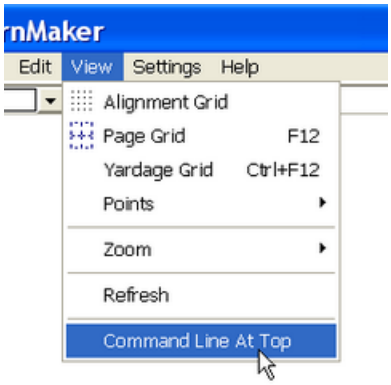
If you wish, you can, by doubleclicking at the command line, move the command line to the top of the screen, right under the Status bar. Some users find it easier to keep an eye on the command prompts when the command line is in this position.



Procedure:

- Double click in the blue area of the command line and the panel up moves up to the top or bottom of the screen.
- The command line will remain in its new position each time you open PatternMaker until you move it again by double clicking.

You can also change the place of the Command Line in the View menu by checking/unchecking Command Line At Top.



See also:

Configure/Configure Defaults

Configuring floating windows

The icon bar and the command line area can be turned into "floating" panels or windows.

Procedure:

1. Make sure the PatternMaker window isn't at full size (ie, taking up the whole screen).
2. Click on a clear area in the pane and drag the panel outside the PatternMaker window. Note that you can't perform the drag and drop by dragging an icon in the icon pane. You must click in a clear area.

To return the pane to its normal position, drop it inside the Patternmaker window.

If you shut a panel, you can restore it by going to Settings->Configure->Status Bar and checking either "Icon" or "Prompt" under *Show Panels*.

See also:

Configure Program Options: Status Bar

Customizing the icon bar

When you install PatternMaker, there are certain icons visible on the icon bar. These represent some of the most commonly-used commands. However, there are far more icons available than there is room on the icon bar. So, you can choose to hide some of the default icons and turn on the icons for your favorite commands. The number of icons you can fit on the icon bar is limited only by the size of your screen.

Not all commands have icons, but most do. The available icons can be seen next to the command name on the menus.

You can also attach your favorite macro to a button, or any command that doesn't already have a specific icon. There are 20 custom icons that you can use for buttons that otherwise have no picture.

See also:

Configure Program Options: Icon Bar

Configuring Hot Keys

This feature gives you the option of reprogramming the standard Hot Key assignments. If you find the <Ctrl>+<F> combinations too awkward for using the Snap modes, feel free to change them to something more convenient!

You can also save different sets of Key assignments, in case you'd like to use different keys depending on what you're doing.

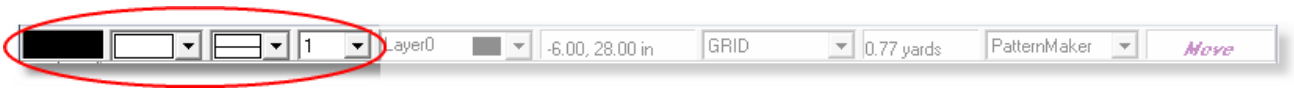
The Hot Key configuration files are saved in the user settings for each profile on the computer. This means that everyone who logs on to the computer can save the Hot Keys the way they like them best. You can also move your configuration file to a different computer.

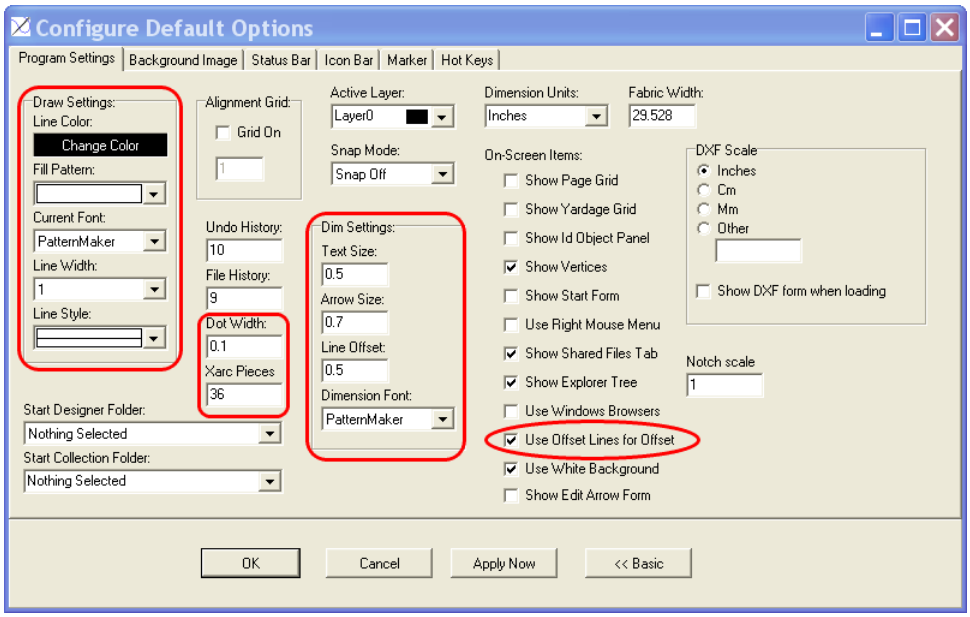
See also:

Configure Program Options: Hot Keys

Setting drawing preferences

Several of the most frequently used drawing options are available as drop-down boxes on the status bar; all those as well as other options can also be accessed from the "Configure/Configure Defaults" form.





See also:

CHANGE OBJECT command

LAYER command

Configure/Configure Defaults

Configure: COLOR

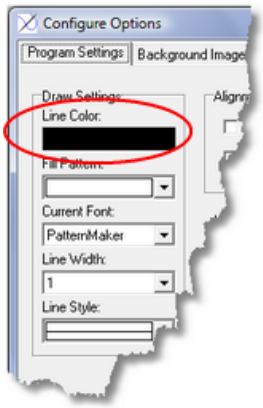
This command selects a color for any new objects that are added to the drawing. It does not change the color of any existing objects. The color selection affects both the line color and the fill color.

There are several ways to change the drawing color:

Status Bar:
Use the "Line Color" drop-down box on the status bar, and select a new color as described below.

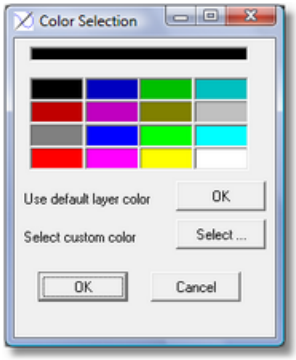
Color Icon:
Activate the COLOR command by clicking the Color icon, and choose a new color as described below.

Configure Form:
Use the "Line Color" field on the *Program Settings* tab of the Configure form. The Configure form is found on the **Settings** menu. Select a new color as described below, and then click the "Okay" button on this form to return to the drawing screen.

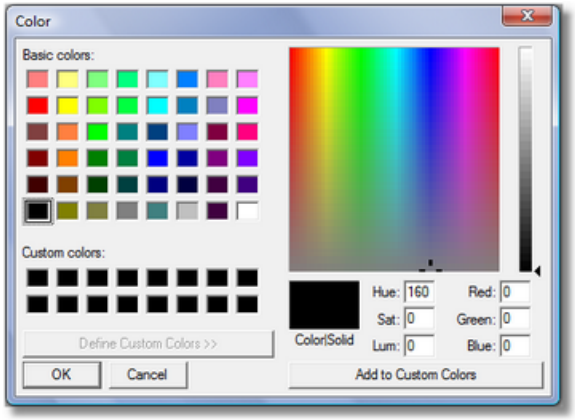


Choosing a color:

Regardless of which method you use, you will then see a dialog box:



You can choose either the default layer color or any custom color. If you want a custom color, click the "Select" button, and the standard Windows color dialog box will open.



If you choose any color other than the layer default, your choice will override the default layer color. Any object that you draw after making this change will be in the color you selected, regardless of the layer's default color.

Make your color selection and then click the "OK" button to return to the drawing screen.

To change the color of an object that has already been drawn, use the CHANGE OBJECT command on the Edit menu.

See also:

Default layer colors
Configure/Configure Defaults
Configure Program Options: Program Settings
CHANGE OBJECT command

Configure: PATTERN

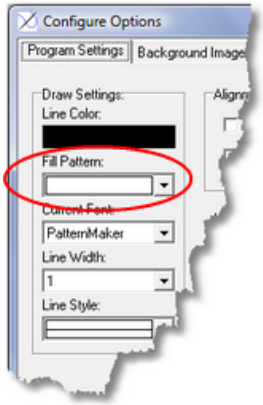
This command selects a new fill pattern for any new polygon objects that are added to the drawing. It does not change the fill pattern of any existing objects. The fill pattern will always be the same color as the object itself.

There are several ways to change the fill pattern:

Status Bar:
Use the "Fill Pattern" drop-down box on the status bar and select a fill pattern as described below.

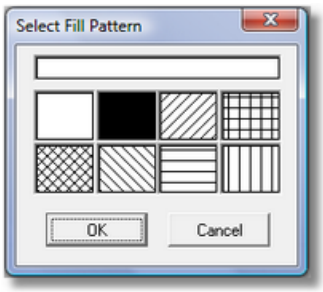
Pattern Icon:
Activate the PATTERN command by clicking the Pattern icon, and choose a fill pattern as described below.

Configure Form:
Use the "Fill Pattern" field on the *Program Settings* tab of the Configure form. The Configure form is found on the **Settings** menu. Select a fill pattern as described below, and then click the "OK" button on this form to return to the drawing screen.



Choosing a fill pattern:

Regardless of which method you use, you will then see a drop-down menu or a dialog box:



There are eight options for the fill style: six patterns, plus "solid" and "empty." The selection at the top is the current

pattern (the default is EMPTY, which draws unfilled objects). After you make a selection, it remains in effect until you change it again, or until you restart PatternMaker.

Note: Not all printers handle filled objects the same way. Make sure you like the way yours prints before you use very many different fill patterns.

To change the fill pattern on an object that has already been drawn, use the CHANGE OBJECT command on the **Edit** menu.

See also:

Configure defaults

CHANGE OBJECT command

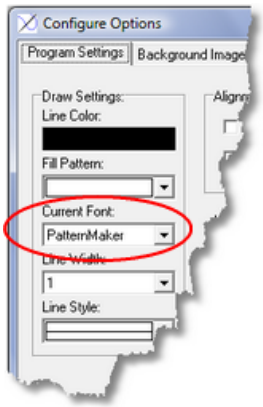
Configure: FONT

The FONT command is used to select a new font style (typeface). When you draw new Text objects, they will use this font. To change the font of an existing Text object, use the CHANGE FONT command on the **Edit** menu.

There are two ways to change the font:

Status Bar:
Use the "Font" drop-down box on the status bar. Select the font you want to use.

Configure Form:
Use the "Font" field on the *Program Settings* tab of the Configure form. The Configure form is found on the **Settings** menu. Select the font you want, and then click the "OK" button on this form to return to the drawing screen.



Whichever way you do it, you will see a drop-down box with the different fonts that are available. You can use any TrueType font that is installed on your computer; however, keep in mind that they may not appear as you expect. All TrueType fonts will appear "hollow" (see the illustration below). To avoid this, use the default PatternMaker font.

This is the default PatternMaker font

This is Arial

This is Times New Roman

Print a test page before using very many TrueType fonts, to be sure you like the way they look in print.

After you choose a font, it remains active until you change it again, or until you restart PatternMaker.

See also:

- Configure defaults
- CHANGE FONT command
- CHANGE TEXT command
- TEXT command

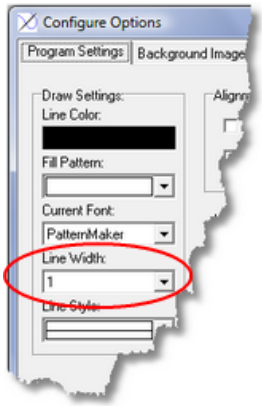
Configure: LINE WIDTH

This command sets the width of the drawing line. Every new object you draw will be drawn using the new line width.

There are two ways to change the line width:

Status Bar:
Use the "LineWidth" drop-down box on the status bar. Select the line width you want to use. This can be from 1 to 10.

Configure Form:
Use the "Line Width" field on the *Program Settings* tab of the Configure form. The Configure form is found on the **Settings** menu. Select the line width you want, and then click the "OK" button on this form to return to the drawing screen.



Whichever way you do it, the drop-down box displays the current width at the top (the default is 1), with the other options below (with a maximum line width of 10).

After you choose a line width, that selection remains active until you change it again, or until you restart PatternMaker.

If you want to change the line width of an object that has already been drawn, use the CHANGE OBJECT command on the **Edit** menu.

Note about line widths: *The appearance of the printed lines depends on this line width*

setting together with your printer settings. When PatternMaker prints a pattern, it tells the printer to print everything "one dot" wide (or two dots, or five, or whatever you have selected). If your printer is set on a high resolution -- that is, lots of dots per inch -- the dots are very small. If the printer is set on a lower resolution -- fewer dots per inch -- each dot is larger. The highest resolution (very small dots) is what you want for printing certain things, like photographs, but this can result in your pattern lines being too faint. If you encounter this problem, try changing your printer settings before changing the line widths of everything in your drawing.

Note: Changing the line width to 2 or higher will only be effective on solid lines. Dotted lines will always be printed with a line width of 1.

See also:

Configure defaults

CHANGE OBJECT command

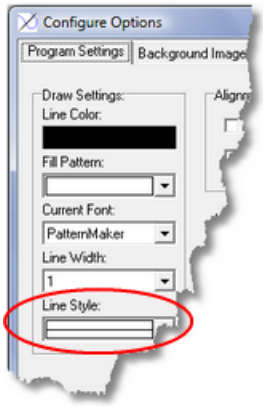
Configure: LINE STYLE

This command sets the current line style to solid line, dotted, dashed etc. Every new object you draw will be drawn using the new line style.

There are two ways to change the line style:

Status Bar:
Use the "LineStyle" drop-down box on the status bar. Select the line style you want to use.

Configure Form:
Use the "LineStyle" field on the *Program Settings* tab of the Configure form. The Configure form is found on the **Settings** menu. Select the line style you want, and then click the "OK" button on this form to return to the drawing screen.



Whichever way you do it, you will see a drop-down box with the different line types:

The pattern at the top is the current style. The default style is a solid line. Below are the five available types. After you choose a line style, it remains active until you change it again, or until you restart PatternMaker.

If you want to change the line style of an object which you have already drawn, use the CHANGE OBJECT command on the **Edit** menu.

Note: Not all printers print these line styles the same way. Make sure you like the way yours prints before using line styles extensively.

Changing the line width to 2 or higher style will only be effective on solid lines. Dotted lines will always be printed with a line width of 1.

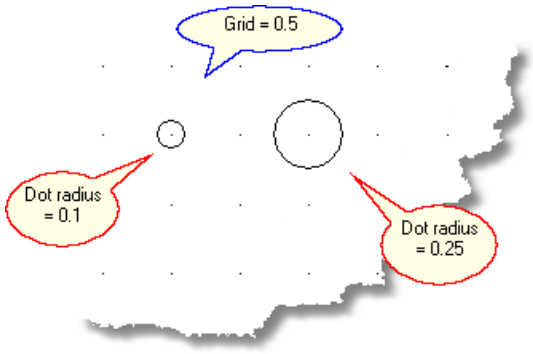
See also:

Configure defaults

CHANGE OBJECT command

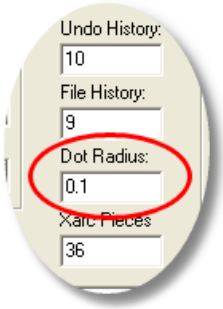
Configure: DOT RADIUS

This setting changes the size of the DOT pattern marking.



Procedure:

- Select "Configure" or "Configure Defaults" from the **Settings** menu, then click the *Program Settings* tab.
- If you only see a few options on the form, click the "Advanced" button at the bottom of the form.
- Enter a number in the "Dot Radius" field. This is the radius of the dot.



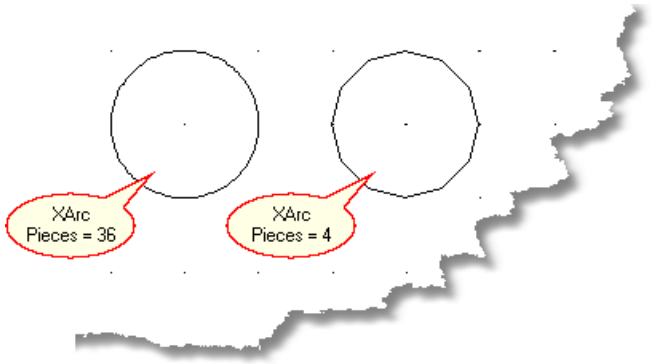
The size of the dot is based on the Measurement Units you have selected. If inches are selected, a dot size of .25 has a 1/4 inch radius.

See also

Configure/Configure Defaults

Configure: X-ARC PIECES

This setting controls the smoothness of the XArc curves. A higher number makes smoother curves, but in a large, complicated drawing it may make a noticeable difference in the program's response time.

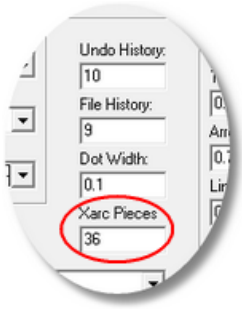


The smoothness of the curves is far more apparent in the printed pattern than on the screen. You probably won't notice any difference in the on-screen curves until the number gets below 12, so if you find that your drawing is slow to refresh, try setting this number quite low until you're ready to print the pattern.

Changing this setting will affect all the existing arcs in your drawing. You cannot have a number of curves with different "XArc Pieces" values.

Procedure:

- Select "Configure" from the **Settings** menu, then click the *Program Settings* tab.
- If you only see a few options on the form, click the "Advanced" button at the bottom of the form.
- Enter a number in the "XArc Pieces" field. The default of 36 provides a good balance between speed and smooth curves.



Note: This setting only affects circles and curves drawn with the POLY command, including those drawn by the macros. It does not affect the number of segments in a COMPASS arc, nor the number of segments used for the OFFSET LINES option.

See also

Configure/Configure Defaults

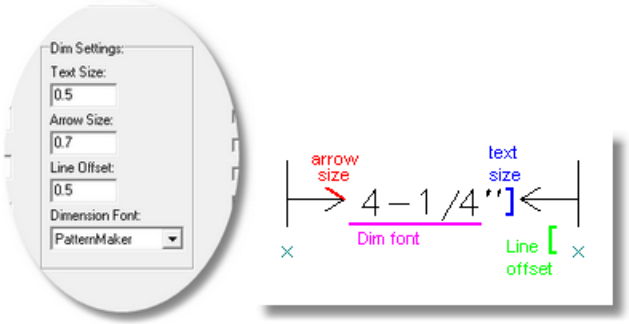
Configure: DIM SETTINGS

This setting controls how dimension objects are drawn.

Procedure:

1. Use the "Dim Settings" section of the *Program Settings* tab of the Configure form. The Configure form is found on the **Settings** menu.
2. The settings are:

Text Size	The size of the numbers, in "units" -- either inches or cm, depending on your settings.
Arrow Size	The length of the arrowheads
Line Offset	The distance between the dimension lines and the actual points being measured, to keep the dimension line from getting in the way. The distance from the point being measured to the Dim line is 1/2 of the offset.
Dim Font	The typeface used for the Dimension words



3. Enter the values you want, and then click the "OK" button. The changes you make apply to all existing Dim objects, as well as ones created after you make the change.

Note: The Dimension text size also determines the size of the names of grading arrows.

See also:

DIM command

Set measurement units

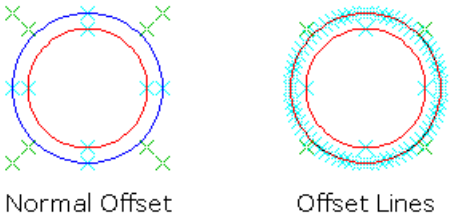
Configure/Configure Defaults

Configure: OFFSET LINES

The OFFSET LINES setting applies specifically to objects drawn using the OFFSET or SEAM ALLOWANCE command.

> *The SEAM ALLOWANCE command always uses offset lines; it is an optional setting for the OFFSET command.*

When active, this option draws a curved line as a series of tiny line segments. There are certain circumstances in which this can improve the shape of an Offset object (seam allowance). However, if you choose this option, you can no longer change the shape of the curve by moving the corner control point, because there no longer is a control point. The Offset object can still be edited by moving the individual line segments, but it is vastly more difficult and laborious.



Notice that the original object drawn with the CIRCLE or POLY tool is not affected.

To toggle this setting on or off, select "Configure" or "Configure Defaults" from the **Settings** menu, and click the *Program Settings* tab. Click in the "Offset Lines" check box to turn this option on or off.

Note: Objects drawn with offset lines remain that way, even when you change the setting on the Configure form.

See also:

- OFFSET command
- SEAM ALLOWANCE command
- Configure/Configure Defaults

Menus and dialog boxes

This section covers several other menu and dialog box options that you can customize in Configure or Configure defaults.

Choose LaunchPad vs Windows dialogs

One of the most fundamental choice in PatternMaker 7.5 is the option of using the new LaunchPad interface. This new feature has been carefully designed to help you easily locate your files and pre-designed garments, and save your pattern files without worrying about losing them.

The LaunchPad interface features a focus picture for every file, and explanatory text for all pre-designed garments. You can also save comments along with your own pattern files.

The LaunchPad interface is active by default. If you would prefer not to use it, you can turn it off by marking the "Use Windows Browsers" checkbox on the "Configure" or "Configure Defaults" form. If the box is checked, the standard Windows dialog boxes are used instead of the LaunchPad windows.

See also:

- LaunchPad interface
- Configure/Configure Defaults

Show/hide Start form

The Start form offers a quick way to choose the activity you want to do with PatternMaker.

The Start form is turned on by default when you first install PatternMaker. If you turn off the form, you can get it back with this setting on the "Configure" or "Configure Defaults" form.

Procedure:

- Select "Configure" or "Configure Defaults" from the **Settings** menu, then click the *Program Settings* tab.
- Mark or clear the "Show Start Form" checkbox.

See also:

Start Form

Configure/Configure Defaults

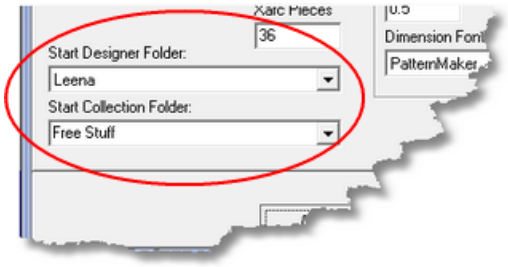
Set Start locations

This setting determines the default designer and garment collection that will be selected when you first choose the MACRO command upon starting PatternMaker.

Once you have navigated to a different collection or designer folder, the MACRO command will open to the last selected location. This makes it convenient to use one pattern several times, or use more than one pattern in a collection. But the next time you open PatternMaker, the Start folder will return to this default location.

Procedure:

- Select "Configure" or "Configure Defaults" from the **Settings** menu, then click the *Program Settings* tab.
- If you only see a few options on the form, click the "Advanced" button at the bottom of the form.
- Then click in the fields to select the desired location from the drop-down box.

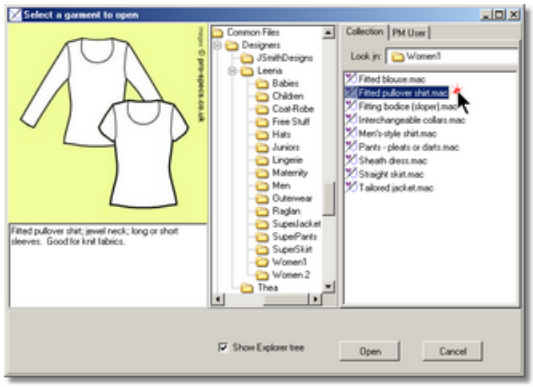


See also:

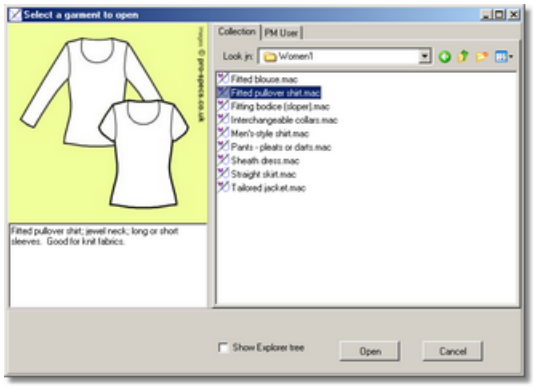
Configure defaults

Show Explorer tree

This setting toggles the Explorer tree in the LaunchPad windows.



Explorer tree is on



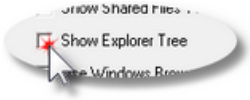
Explorer tree is off

The LaunchPad interface normally hides the locations of files, and instead directs you to a particular location that depends on the type of file you are opening or saving.

If you want to save a file in a different location, or if you simply want to know where the files are going, you can turn on the Explorer tree in the LaunchPad window. This provides a view of the standard Windows Explorer tree.

Procedure:

- Select "Configure" or "Configure Defaults" from the **Settings** menu, then click the *Program Set*tings tab.
- If you only see a few options on the form, click the "Advanced" button at the bottom of the form.
- Mark or clear the "Show Explorer Tree" checkbox.



- There is also a checkbox on the LaunchPad form that does this same thing.

See also:

Folders and file organization

Configure defaults

Show shared files

This feature is primarily intended for those who share a computer with another PatternMaker user. It provides easy access to the folder where shared files are stored.

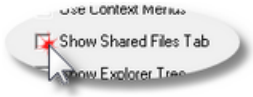
By default, program files and garment collections are installed to a location where all users can access them. Any file created by a user, on the other hand -- a saved pattern file, personal measurement table, grading table, etc. -- is saved in the user's "personal" folder. In most shared computing environments, these files will be inaccessible to other users.

In order to share a pattern file you've saved -- for example, a teacher who wants her students to alter a pattern she has designed -- it must be saved to the shared location.

If you need to save something in the shared location and the *Shared Files* tab is not visible, you can navigate to the shared location using the Explorer tree in the LaunchPad window.

Procedure:

- Select "Configure" or "Configure Defaults" from the **Settings** menu, then click the *Program Settings* tab.
- If you only see a few options on the form, click the "Advanced" button at the bottom of the form.
- Mark or clear the "Show Shared Files Tab" checkbox.



See also:

Folders and file organization

Configure defaults

Set Undo history

This setting lets you specify how many UNDO steps you want stored in the computer's memory. This number can be anything you want; a higher number gives you more flexibility in retracing your steps, but it will make the program run more slowly.

Procedure:

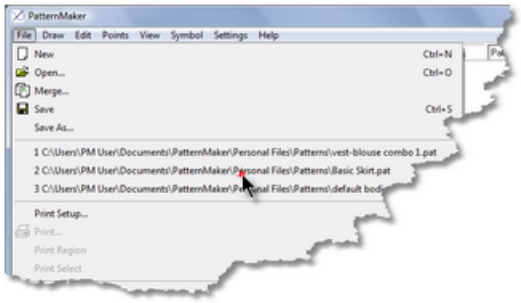
- Select "Configure" or "Configure Defaults" from the **Settings** menu, then click the *Program Settings* tab.
- If you only see a few options on the form, click the "Advanced" button at the bottom of the form.
- Enter a number in the "Undo History" field.

See also:

Configure defaults

Set File history

This setting lets you specify how many previous files you want displayed on the **File** menu. This number can be anything you want; a higher number just takes up more room on the menu.



Procedure:

- Select "Configure" or "Configure Defaults" from the **Settings** menu, then click the *Program Settings* tab.
- If you only see a few options on the form, click the "Advanced" button at the bottom of the form.
- Enter a number in the "File History" field.

See also:

Configure defaults

5.2 Using Layers

Layers are an advanced drawing feature that help you organize objects in your PatternMaker drawings. Every object in your drawing is on a layer. When you turn a layer off, all of the objects on that layer disappear from the screen. You don't see them, they can't be selected, and you can't print them. When you turn the layer back on, the objects reappear.

> ***Note:*** *If you select an object that is grouped with other objects, those objects are selected as well, even if they are on layers that are turned off (see Using Groups). This is the only way to select objects in layers that are turned off.*

Use the LAYER command to navigate from one layer to another. The CHANGE OBJECT command is used to change the layer of an existing object. Use the ID OBJECT PANEL to check what layer an object is on.

You can assign your objects to layers any way you want, but normally you will want to put each size on a different layer because this is how the Grade command treats the different sizes.

> ***Tip:*** *You can run a macro several times on different layers to compare different style options in the macro, or to see the effect of changing measurements. Each layer uses a different color, so it's easy to see changes.*

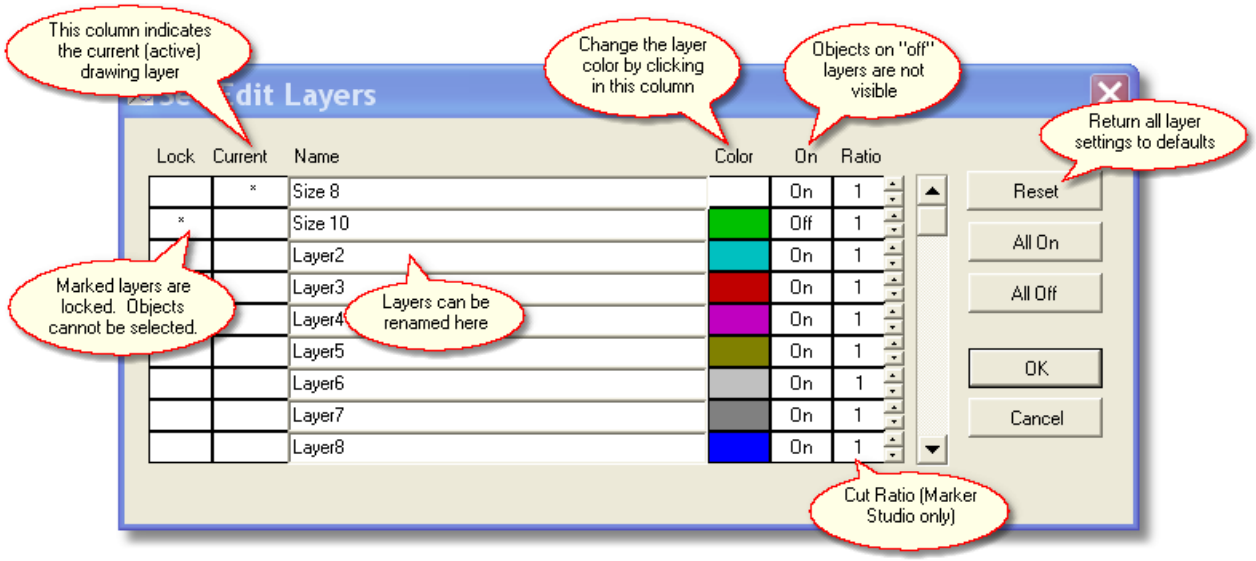
Example: *Suppose your drawing contains many text items and the time it takes to display these on screen is slowing your computer down. Put all the text objects on one layer and turn it off until you need to see them.*

Example: *Suppose your drawing contains several sizes. Put the pieces for each size on a different layer. Give the layers names such as Size8, Size10, etc. When you want to print Size10, use Layer to turn off all the other layers and then select the* Print *command.*

The LAYER dialog box

The LAYER command is used to display and/or change the settings for the layers. These settings include their names, colors, and whether they are on or off (visible or hidden), as well as changing the active layer on which new objects are drawn. The LAYER command can be selected from the **Settings** menu or by using the <F11> Hot Key.

When you select the command, a large dialog box will come up with a display of the information for each layer. Each line represents a different layer. The current layer is represented with an asterisk. There are 24 layers, but they won't all be visible in the dialog box at once. Use the scroll bar to move up and down the list. You can change any of the settings by clicking the mouse on the item you want to change.



See also:

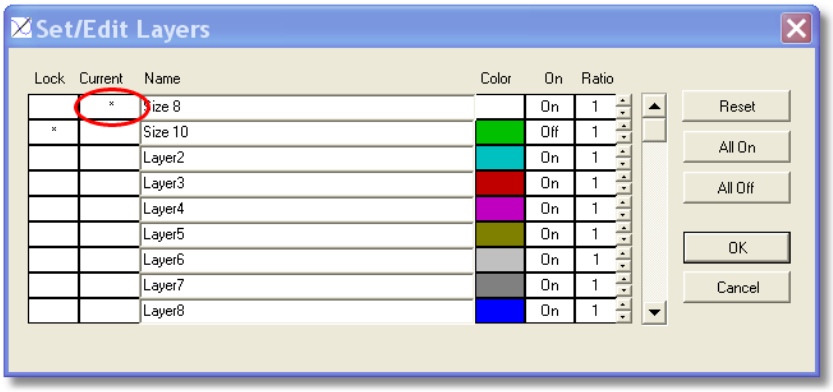
LAYER command

Default layer colors

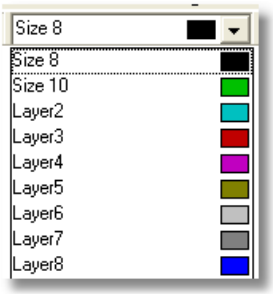
Set the current layer

Any new objects that are drawn will be placed on the current layer.

You can change the current layer with the LAYER command (<F11> or the **Settings** menu). The current layer is marked with an asterisk and highlighted. Select a different layer by clicking in the "Current" column of the layer list. The previous current layer will be untagged, and the new current layer will be tagged. Close the Layer box by clicking the "OK" button.



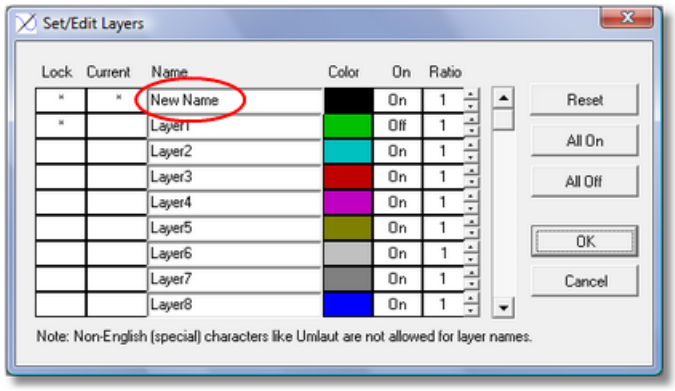
The Status Bar has a "Layers" drop-down box that you can use as an alternate method of switching from one layer to another. However, you cannot change the name or color of the layer from this drop-down box.



Naming a layer

Each layer has a default name: "Layer0," "Layer1," "Layer2," etc.

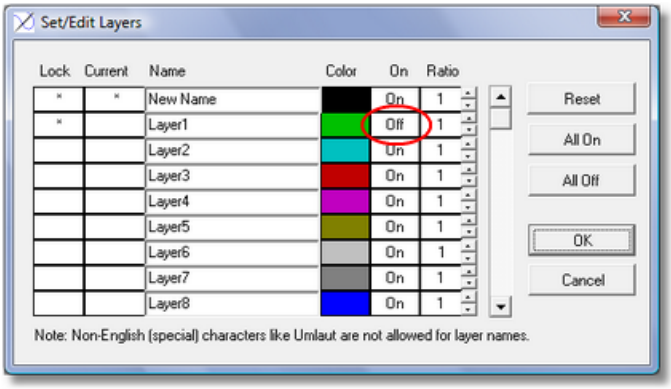
You can change a layer's name with the LAYER command. Open the "Layer" dialog box either by pressing the <F11> Hot Key or from the **Settings** menu. Click on the name you want to change, and retype it. Click the "OK" button when you're finished.



Turning a layer on and off

You can turn a layer on and off with the Layer command. Just open the Layer box (<F11> or the **Settings** menu) and click on the word "on" or "off" next to the layer you want to change. When you are done, click the "OK" button.

Only the objects on a layer that is turned On are visible.



Default layer colors

Each layer has an automatic default color, called "LayerColor." That's its name, just like the colors called "Red" or "Blue". The layer color is what determines the color of new objects that are added to the drawing. All new objects are drawn using "LayerColor" *unless* you specifically change the current drawing color or assign a different color to an object.

Examples:

- An object's color is "LayerColor" and it is on Layer0. The object is black (default color of Layer0). If you move the object to Layer1, the object turns green, because that is the default color of Layer1.
- Layer0 is active (default color black), and you change the drawing color to red and draw a shape. The new

shape is red. If you move the object to Layer1 (default color green), the object is still red.

If you want to change the default color of a layer, any object on that layer with the color assignment of "LayerColor" will be updated to the new color. The settings for changed layer colors are saved in the internal file format when you save a drawing.

However, when you begin a new drawing, or when you start PatternMaker the next time, the settings revert to the default layer colors. You cannot permanently change the default layer color.

See also:

COLOR command

CHANGE OBJECT command

Assigning objects to a layer

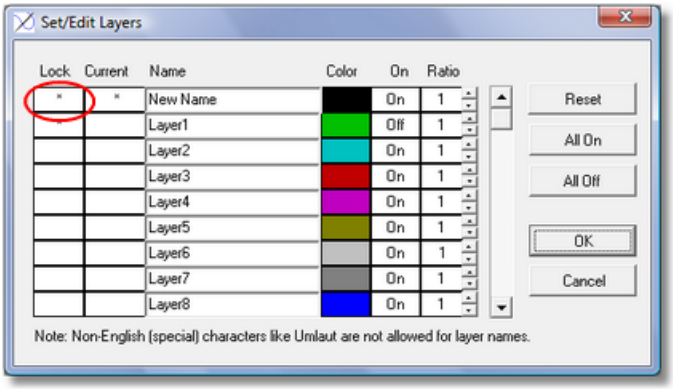
When you draw an object, it is automatically drawn on the current or "active" layer.

Often you will draw things first, then decide later what layer to put them on. This is fine. If you have a drawing with some objects in it, and you haven't assigned them to layers, then they are probably on Layer 0. Use the CHANGE OBJECT command if you want to move them to a different layer.

Layer Lock

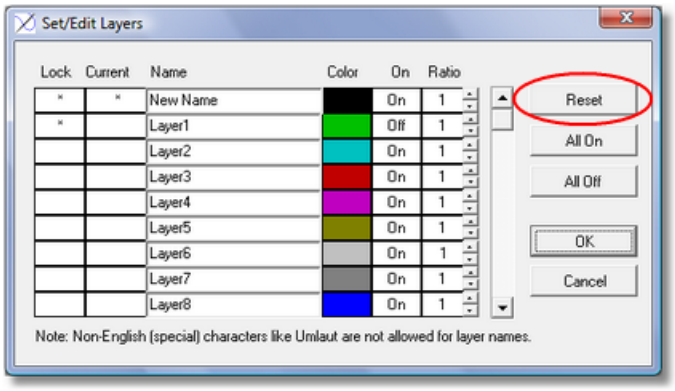
When a layer is locked, it means that its objects are visible, but cannot be selected or manipulated in any way. This can be useful if you need to trace an object, or compare one or more objects.

Open the "Layer" dialog box either by pressing the <F11> Hot Key or from the **Settings** menu. Click in the "Lock" column for the layer you want to lock. An asterisk * indicates that the layer is locked. Click the "OK" button when you're finished.



Reset Layers

If you click on the "Reset" button in the Layer box, all layer names, colors and on/off status will be set to the original values.



5.3 Using groups

When objects are grouped together, you select every object in the group by clicking on any object in the group. This way, objects that belong together stay together. For instance, a single piece of your pattern may consist of the outer cutting line, some dotted lines showing the stitching lines, another object showing the grain line, some text describing the piece, and other objects. Group objects together if you want them to stay together through commands such as MOVE or ROTATE, or ARRANGE MARKER.

You can also save a group of objects in a library file and load them into other drawings. See Using symbols and libraries

Use the GROUP command to create groups, and the UNGROUP command to break groups up. (This should not be confused with the EXPLODE command, which is used in working with symbol objects. Do not use EXPLODE to break groups apart.)

5.4 Types of files

Normally, when you open a type of file, the list that appears is filtered, to show you only the files that are of the type you are opening. (For example, when you are opening an ordinary drawing, you do not see the files that contain grading tables, or the font files.) However, if you look at the PatternMaker folder with Windows Explorer, you will see a variety of file formats. Here's a list of the file types used by PatternMaker:

.PAT
This is the standard PatternMaker format for saved pattern files.

.MAC
This file extension is used for the PatternMaker pre-designed garments (macros). See Using the pre-designed garments.

.MMT
This is the "Master Measurement Table" set up by the designer of a macro. It is a template file that shows which body measurements the designer uses in drafting his/her macros.

.MTB
This is the personal measurement table that you save with your own name and measurements. Each .MTB file is based on an .MMT file from a particular designer.

.DXF
This is sometimes called the AutoCAD format. It is used by many popular CAD and graphics programs.

.KEY
This is a file containing a custom Hot Key configuration set.

.GRD
This is a saved grading file (Grading Studio or Marker Studio only)

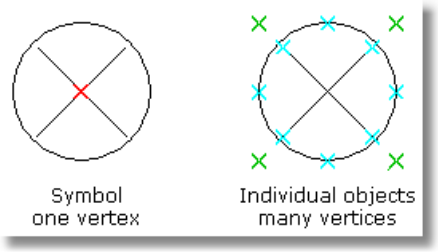
Library Files

PatternMaker also lets you use a drawing file (.PAT) as a library of items that you can put into your patterns. You can load single objects, groups of objects, or symbols from a library file. Use a library whenever you want to insert many copies of the same item in many different drawings. Any drawing file can also be used as a library file. The library commands are found in the Symbols menu and are described in Using symbols & libraries.

One library of common pattern symbols is included with PatternMaker. If you have the Grading Studio or Marker Studio, you can also create your own libraries.

5.5 Using symbols & libraries

A symbol is a piece of a drawing that is repeated in many places. For instance, a grain line can be drawn as a symbol. When you use a grain line symbol, you can add as many identical grain lines as you like. A symbol is different from something you normally draw in that it has only one vertex. The symbol is manipulated as a single entity, rather than several individual objects.



Note: If you have PatternMaker Professional Studio, you can use symbols from the included symbol library, but you cannot create new symbols or libraries. If you have Grading Studio or Marker Studio*, you can create your own symbols and libraries as described in this chapter.*

If you change the definition of a symbol, that symbol will change wherever it is used in your drawing. PatternMaker includes a library of basic symbols for you to use in your patterns, and with Grading Studio or Marker Studio you can easily make your own symbols and libraries.

There are two phases to using a symbol:

- Create the symbol definition. This is essentially just a group of ordinary objects, but they are kept in the computer's memory and not shown on the screen.

- Insert the symbol into the drawing. This tells PatternMaker what symbol to draw and where to draw it. You can make as many insertions of the same symbol as you like. Since they all refer to the same definition, they will always be exactly the same.

Symbol insertions are one of the four types of PatternMaker objects. You can use most of the edit functions on a symbol, without changing the symbol definition.

Create a symbol

There are two ways to get a symbol into your drawing:

- Read it out of a symbol library with the INSERT SYMBOL command.
- Make a new symbol from objects already in your drawing, using the CREATE SYMBOL command. This makes copies of the objects and stores them as a symbol definition, but it doesn't have any effect on the objects themselves.

You can redefine a symbol by creating a new definition with the same name. If there were insertions of the symbol, they will all change when you redefine it.

Details of defining symbols can be found under the Symbols menu, but the general procedure is as follows:

1. Draw the symbol you want using ordinary drawing commands. For instance, a grain line symbol may consist of several lines (polygons).
2. Select the Create Symbol command. You will be prompted for a name for your symbol
3. Select all the objects that you want to include in the symbol definition.
4. When you are done selecting these, you will be asked for an insertion point. This is where the vertex of an insertion object goes.
5. After you select the insertion point, you will be told

   `Symbol xxx created` and you are done.
6. Save the file (**.PAT** file) in the library folder to have easy access when opening the library to be able to insert a symbol.
   The best place to save the library files is in: Program files (x86)/PatternMaker software/Shared/Patterns/Library

Remember that the individual objects you used to define as the symbol aren't converted to a symbol themselves. The symbol definition is stored internally with the file information, but the things in your drawing that you used to make the symbol are still just individual objects. For consistency throughout your pattern, consider erasing the original objects and replace them with an insertion of the new symbol.

Exploding a symbol

When you create a symbol, all the objects you selected as parts of the symbol are manipulated together as one unit. The EXPLODE command is used to "undo" a symbol creation – i.e., the parts of the symbol return to individual objects.

If you use the Explode command on a symbol insertion, it will be replaced with ordinary objects. It will look just the same, but new objects have been created. This is used to modify and redefine existing symbol definitions.

If you use Explode on a polygon, it will be broken up into individual line segments and arcs. It will look just the same, but these will be separate objects.

Library: a collection of symbols

Note: If you have PatternMaker Professional Studio, you can use the library of symbols that comes with the program, but you cannot create your own libraries.

A library is a file (actually a .pat file) containing symbol definitions, named objects, or groups of objects (see Groups). You can open a library and read one or more definitions into your current drawing. First, use the SELECT LIBRARY command to select a library file. Then use INSERT to select the particular item you want to load.

Libraries are a powerful way for you to save and reuse your work. By using libraries, you can reuse your work in many different drawings. Libraries also make it easy for you to share work with other people. Make up libraries of any important pattern pieces, basic blocks, logos or graphics, standard symbols, your name, or anything else that you want to use over and over.

You create a library with a symbol (or several symbols) simply by saving the drawing. Any drawing (**.PAT** file) can be read as a symbol library. You can use your ordinary drawings as libraries, or make special-purpose library files.

For easy access to get to your library files we made a special library folder in: Program files (x86)/Patternmaker software/Shared/Patterns/Library
When**.PAT** files that contain symbols, named groups or named objects are saved in this library folder they will show immediately when you want to select a library

See also: CREATE SYMBOL command

5.6 Overview all Snap modes

Working with Snap modes will make your work more accurate. You can select the several Snap functions at your Status bar, iconbar or with Hot Keys.
Here an overview of all Snap modes that will make your work much easier:

Name: **Snap Off**
Hot Key: <CTRL>+<F1>
What It Does: Turns off any active Snap
Why Use It? When you want the cursor to move around normally

Name: **Snap to Grid**
Hot Key: <CTRL>+<F2>
What It Does: The cursor jumps from one grid dot to another. (And you can customize the size of the grid.)
Why Use It? Align the edges of objects; quickly move something a distance equal to the size of the grid.

Name: **Snap to Endpoint**
Hot Key: <CTRL>+<F3>
What It Does: The cursor jumps from one point in an object (a vertex) to another.
Why Use It? Essential for moving individual points; excellent for selecting a rotation point.

Name: **Snap To Nearest**
Hot Key: <CTRL>+<F4>
What It Does: The cursor jumps to the contour of an object.
Why Use It? Useful if you need to select one object when you have several close together or overlapping. Also used if you need to draw a line exactly to the edge of an object.

Name: **Snap Orthogonal**
Hot Key: <CTRL>+<F5>

What It Does: The cursor moves exactly horizontally or vertically.
Why Use It? When you want to move or draw something directly horizontal or vertical -- ie. lengthening or shortening something, etc.

Name: **Snap To Midpoint**

Hot Key: <CTRL>+<F6>
What It Does: The cursor jumps to the center between two consecutive vertices.
Why Use It? When you need to find the middle of a line segment.

Name: **Snap To Intersection**
Hot Key: <CTRL>+<F7>

What It Does: The cursor jumps to a location where two line segments meet. There does not have to be a vertex at this location.
Why Use It? If you need to draw or move something to the intersection of two other segments.

Name: **Snap To Offset**
Hot Key: <CTRL>+<F8>

What It Does: The cursor jumps to a location a specified distance horizontally and/or vertically from an existing vertex. Frequently, this is not along the contour of an object but "out in space" somewhere near the object.
Why Use It? To find a specific distance away from an existing vertex.

Name: **Snap To Measured Distance**
Hot Key: <CTRL>+<F9>

What It Does: The cursor jumps to jumps along the contour of an object a specified distance away from an existing vertex.
Why Use It? Often used with ADD VERTEX to place a new point in a specific location.

See also:

Basic Snap modes

5.7 Getting patterns to and from other formats

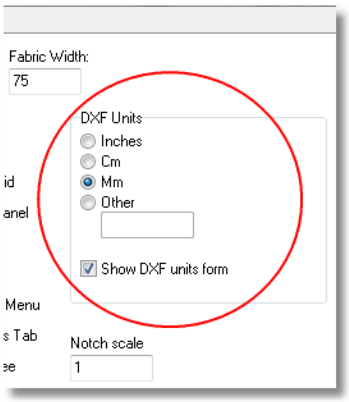
DXF Import/Export

PatternMaker can open and save files in the **.DXF** format. This is a format used by many popular drafting and drawing programs.

Procedure:

To set the default units for opening/saving a .dxf file

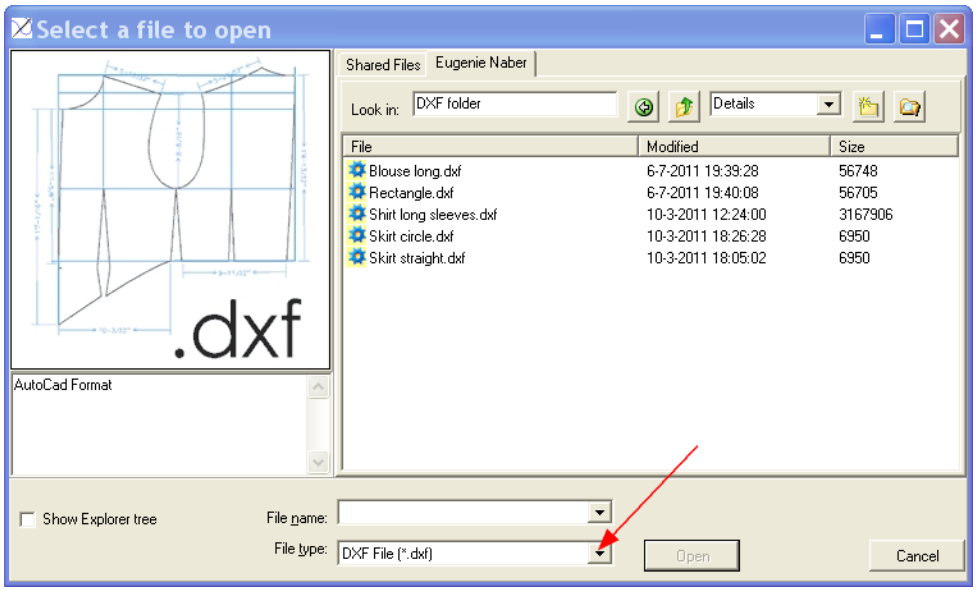
1. Open the Configure default form in the Settings menu.
2. Select the units that you want to set as default when importing or exporting a .dxf file. When you never have to change that setting you can uncheck the box "Show Dxf unit form". If checked PatternMaker will ask you when opening a .dxf file in which units the drawing was made. This is very important to have the drawing converted into the right units.



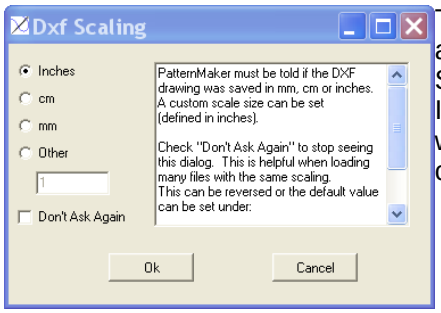
Configure default form in Settings menu

To open a file in .DXF format:

1. Click the Open icon, or select "Open" from the **File** menu. The Open File dialog box appears.
2. If necessary, navigate to the location of the file you want to open.
3. Click on the "Files of Type" drop-down box and select "DXF file (*.dxf)" (see picture). Only the .dxf files will be shown.
4. Select the file you want to open.
5. Click the "Open" button.



6. To open the .dxf file correctly PatternMaker wants to know in **which units** the .dxf file was drawn. Therefore the DXF scaling forms opens:


Dxf Scaling
Inches
cm
mm
Other
1
Don't Ask Again
PatternMaker must be told if the DXF drawing was saved in mm, cm or inches. A custom scale size can be set (defined in inches).
Check "Don't Ask Again" to stop seeing this dialog. This is helpful when loading many files with the same scaling. This can be reversed or the default value can be set under:
Ok
Cancel

The checkbox of the units that you have set as default is checked automatically.
Select the right units. This can be Inches, cm, mm or something else. In the Settings/Configure default form you can set the default units, when importing a .dxf file(see before). With this Dxf Scaling form you can change the units if necessary for this file.

To save a pattern in .DXF format:

1. Select "Save As" from the **File** menu. The Save File dialog box appears.
2. If necessary, navigate to the location where you want the file to be saved.
3. Click on the "Save As Type" drop-down box and select "**.DXF** file".
4. Type a name for your file. PatternMaker automatically adds the "'.DXF" extension.
5. Click the "Save" button.

Note: When you are importing a .dxf file or are saving in .dxf make somewhere in the drawing a dimension line or a rectangle (for instance 10 x 10) which says how many Inches or cm the distance is.
This makes the importing or exporting of the file easier. In this way you can always check if the measurements are converted right and be sure that the scaling of the drawing is done right.

Using bitmap background images

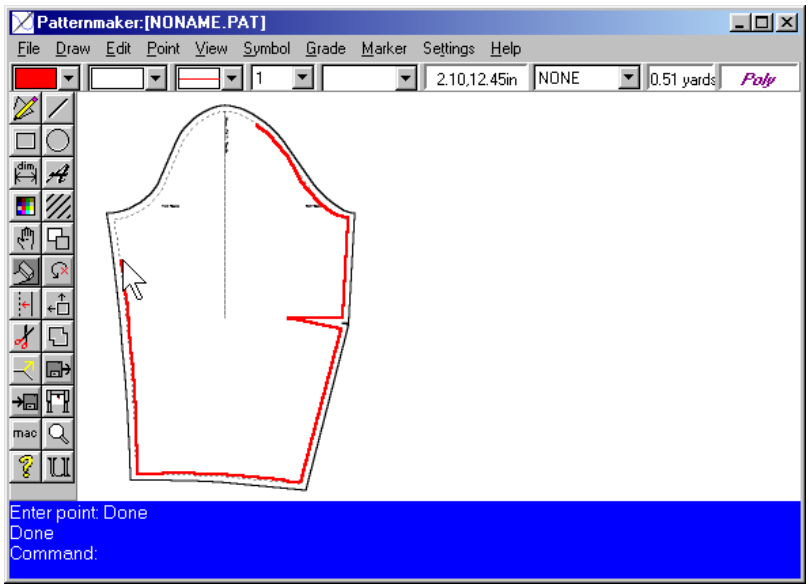
With the bitmap background option, you have a convenient way to make use of your favorite commercial pattern tissues.

Procedure:

1. Scan a pattern piece using your scanner and its software. For pieces that are too large to be scanned in one piece, try the following techniques:
   - your scanner software may have a utility to "stich" or "match" images together. If not, follow these instructions through #5 below, and then move the pattern piece in the scanner and begin again.
   - use a copy machine to reduce the pattern piece to a size that will fit in your scanner.
2. Use the scanner software to save the scanned image as a bitmap (**.bmp** file).
3. Load the bitmap into PatternMaker in Configure/ Background image (see Configure Program Options: Background Image for details).
   For loading a bitmap do not use Configure default/Background image, because then the picture will always be loaded when starting the program.

Once the bitmap is loaded into PatternMaker:

4. Use the POLY command to trace over the sewing line of the scanned image (see illustration below). *Tip: Change the line color (SET LINE) to something that will contrast with the background image.*



5. If you are scanning your pattern in several sections, move the first Poly object to a different part of the screen. The next bitmap you load will be in the upper left corner, and the Poly objects will end up on top of each other. When all the sections are scanned in, use the MOVE command to arrange the Poly objects correctly, then use the JOIN command to connect them.

When the Poly object is complete:

6. On the paper pattern, measure between two "landmark" points (points that will be easy to correlate with points in the object on the screen).
7. Activate the SCALE command on the **Edit** menu. Select the Poly object you just created.
8. Type X if your landmark points were measured horizontally or type Y if your landmark points were measured vertically. PatternMaker then asks you to select two points to measure between. *Tip: Turn on Snap To Endpoint (<CTRL>+<F3>) to measure exactly from point to point.*
9. After you select the measurement points, a dialog box will display the current distance between the selected points. If it does not match the measurement of your printed pattern, type the correct number in the box, and then click the "Okay" button. The entire Poly object will be adjusted so that the piece is sized correctly.

Using third-party programs: WinTopo

WinTopo is a program that can help you convert a bitmap graphic (.bmp, .jpg, .tif, .gif, .png) into a DXF file that PatternMaker can open.

After using the WinTopo one-touch vectorization, plus some PatternMaker tools like ERASE, JOIN, and DELETE VERTEX, you'll be well on your way to have a pattern piece that can be manipulated just like any other PatternMaker object.

A Professional version and a free Standard version are available from the WinTopo website:

Wintopo

See also:

DXF Import/Export

Using the program Project Editor

With the program Project Editor, you can save a pattern file that you made in PatternMaker as a simple macro (**.mac** format). Working with layers, groups, and named objects, you can create a macro with one or two levels of options.

This tool will not work for all patterns, such as those that need to be sized in three dimensions. It will work for two types of patterns:

- a pattern in which the pieces are simply provided in a specific size, such as a garment in sizes small, medium, and large, or craft patterns, doll clothes, etc.
- a pattern in which all the pieces can be resized by the same factor, such as stuffed animals, a collection of hats, etc. This has the same effect as using SCALE or RESIZE on a pattern.

The basic organization is:

1. Layers form the top-level macro options. A drawing with three layers will result in a macro with three options in the first dialog box.
2. Named objects become the sub-options for each layer. Multiple objects with the same name are drawn together as parts of one option.

For more information and step-by-step instructions, see the help of the separate program Project Editor, also made by PatternMaker Software.

Reference: Menu Commands

6.1 File Menu Commands

The **File** menu contains all the commands related to working with files, including Opening, Saving, and Printing. The commands you see will depend on what version of PatternMaker you are using. Not all commands are available in all versions.

NEW command

File -> New

The NEW command clears the screen and starts a new drawing. If you already had something drawn on the screen, you will be given a chance to save your work.

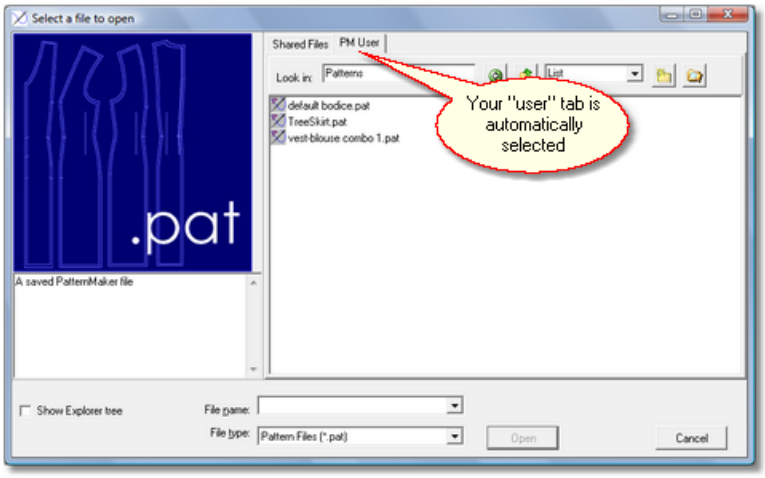
OPEN command

File -> Open

The OPEN command opens an existing drawing (a **.PAT** file) which has been saved on disk. Opening a new file replaces whatever is on the screen. If there is a drawing open, the program will ask you if it should be saved.

Procedure:

1. Click the Open icon, or select "Open" from the **File** menu. The file browser opens.
2. The LaunchPad interface opens to the location where your personal files are automatically saved. If you saved your file in a different place, click the "Show Explorer Tree" checkbox and navigate to the correct location.
3. Select the file you want to open.
4. Click the "Open" button.



See also:

Folders and file organization

DXF Import/Export

OPEN (non-LaunchPad) command

MERGE command

File -> Merge

The MERGE command adds one saved drawing (**.PAT** file) to whatever is on the screen. This is exactly the same as the OPEN command, except that the old drawing is not closed before loading the new one.

Procedure:

1. Select "Merge" from the **File** menu. The file browser opens.
2. Select the file you want to merge. Everything in this file will be added to the current drawing.
3. Click the "Open" button.

The LAYER settings (colors and names assigned to a layer, etc.) will be changed to match the incoming file. Any symbol definitions with duplicate names will be redefined. Objects in the second file will be drawn in the current drawing attributes of the first file.

MERGE *cannot* be reversed with the UNDO command.

Note: You cannot control where on the screen the new drawing will appear. Therefore, you may need to MOVE some pieces out of the way before using MERGE to avoid having pieces in the new file overlap the existing pieces. You can also use layers to keep things separated.

Note: the layer names of the merged files will be the layer names of the first opened file.

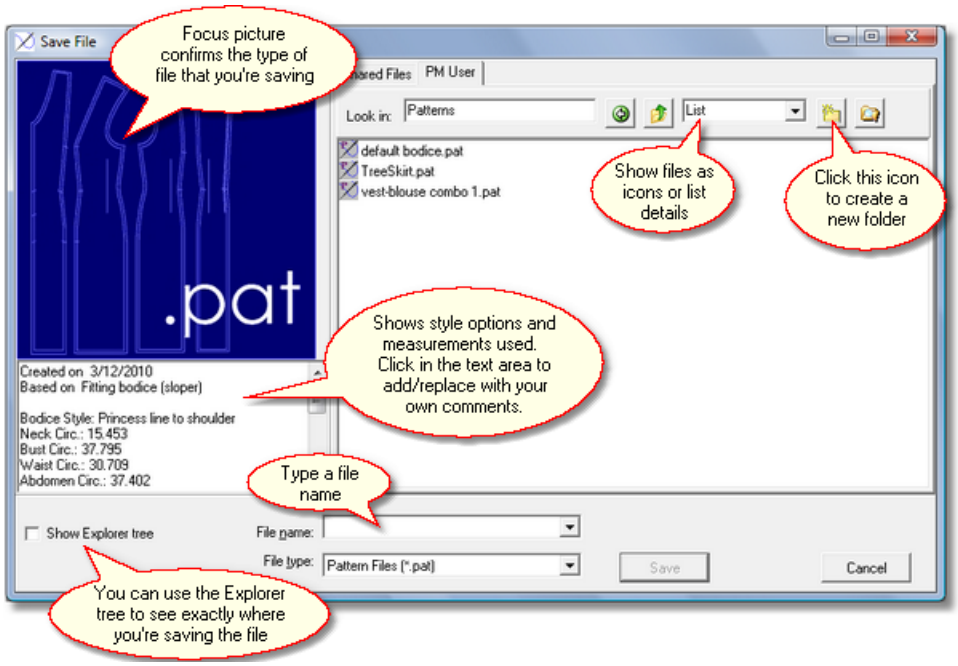
See also:

OPEN command

SAVE command

File -> Save

The SAVE command saves the current drawing in a **.PAT** file. (To save in a different format, use SAVE AS.) If the file you are working on already has a name, this file will be updated. If you have not named the file, the program will ask you for a name.


Save File
Focus picture confirms the type of file that you're saving
PM User
Look in: Patterns
List
default bodice.pat
TreeSkirt.pat
vest-blouse combo 1.pat
Show files as icons or list details
Click this icon to create a new folder
.pat
Created on 3/12/2010
Based on Fitting bodice (sloper)
Bodice Style: Princess line to shoulder
Neck Circ.: 15.453
Bust Circ.: 37.795
Waist Circ.: 30.709
Abdomen Circ.: 37.402
Shows style options and measurements used. Click in the text area to add/replace with your own comments.
Type a file name
Show Explorer tree
File name:
File type: Pattern Files (*.pat)
Save
Cancel
You can use the Explorer tree to see exactly where you're saving the file

Pattern files have names that end in **.PAT**. A pattern file can be opened again later and modified and/or printed.

If the file already exists, a backup file will be made. Its file name extension will be "**.BAK**".

See also:

DXF Import/Export

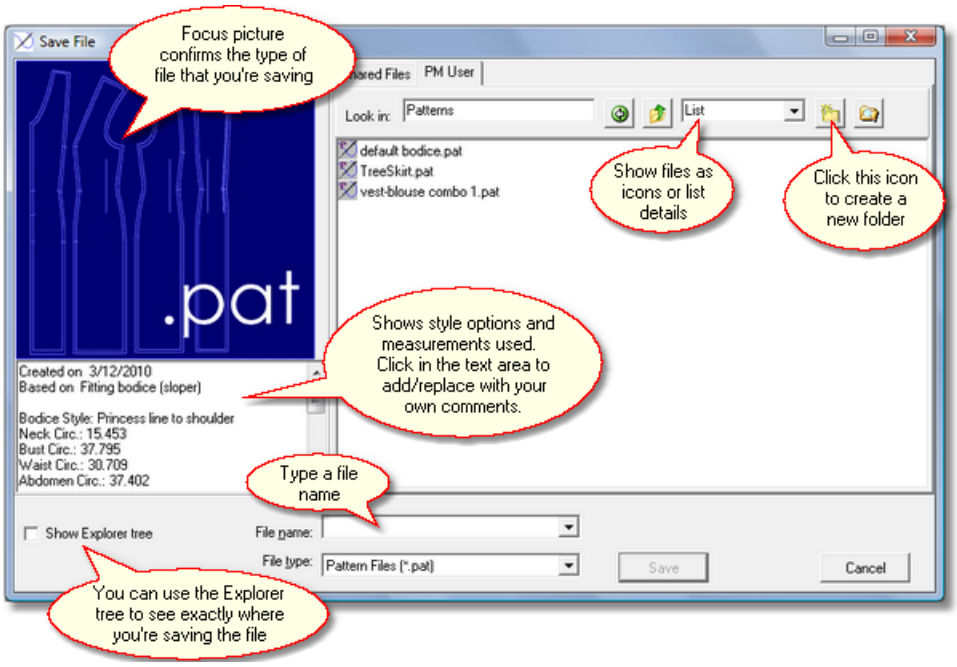
SAVE AS command

The SAVE AS command saves the current drawing with a new file name, while leaving the current file unchanged. Use this to save your new work without erasing your old work.

Procedure:

1. Select "Save As" from the **File** menu. The file browser opens.
2. The LaunchPad interface automatically saves files in a designated location. If you need to save your file in a different place, click the "Show Explorer Tree" checkbox and navigate to the new location.
3. Type a description for your file in the text field. This can be anything you want -- the type of garment, the style options you used, who the pattern is for, etc. This description is optional, but it is very useful when you want to locate the file later.
4. Type a name for your file, or select a file from the list. If the filename you select or type already exists, that file will be overwritten. If you type a new name, a new file is created.
5. PatternMaker automatically adds the **.PAT** extension. If you want to save in a different format, for example **.DXF**, click the "Files of type" drop-down box, and select the file type from the list.

6. Click the "Save" button.


Save File
Focus picture confirms the type of file that you're saving
PM User
Look in: Patterns
List
default bodice.pat
TreeSkirt.pat
vest-blouse combo 1.pat
Show files as icons or list details
Click this icon to create a new folder
.pat
Created on 3/12/2010
Based on Fitting bodice (sloper)
Bodice Style: Princess line to shoulder
Neck Circ.: 15.453
Bust Circ.: 37.795
Waist Circ.: 30.709
Abdomen Circ.: 37.402
Shows style options and measurements used. Click in the text area to add/replace with your own comments.
Type a file name
Show Explorer tree
File name:
File type: Pattern Files (*.pat)
Save
Cancel
You can use the Explorer tree to see exactly where you're saving the file

See also:

Folders and file organization
SAVE command
DXF Import/Export

PRINT command

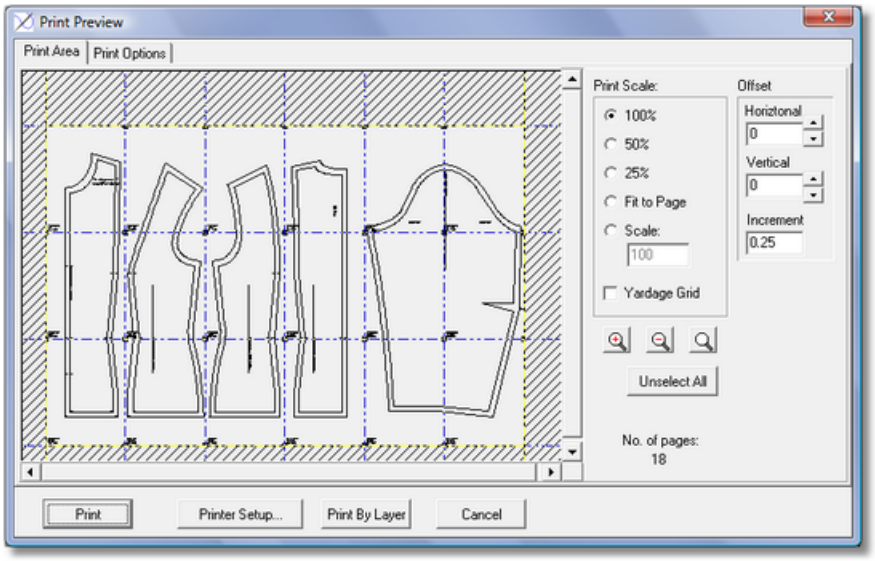
File -> Print

The PRINT command prints the entire drawing, automatically using as many pages as necessary to cover the whole pattern. PatternMaker will print to any Windows-compatible printing device.

When you click the Print icon, or select "Print" from the **File** menu, the Print Preview window opens (see illustration below). This window lets you see how the drawing will be arranged on the pages.

The blue lines show the pages.
The pages which will be printed are not shaded, the pages which will not be printed are shaded. By clicking a unshaded page it will change to shaded and will not be printed anymore. It is very easy to select only those pages you want to be printed.

The small circles scattered over the drawing indicate the alignment marks on the corners of each page, showing you how many sheets of paper will be needed. These marks represent the printable area of the paper, according to the abilities of your printer. You can change from Portrait to Landscape mode (in File/Print Setup) and the marks will change accordingly.



At the top you can see two tabs: **Print Area** and **Print O**ptions.

The Tab **Print Area** has the following options:

Print	Print the drawing according to the selected options
Printer Setup	Open the Print Setup window to change printer options
Print by Layer	Print the drawing by layer
Cancel	Close the Print Preview window and return to the drawing screen

Print Scale

100%	The pattern will be printed in scale 100%. Set by Default
50%	The pattern will be printed in scale 50%
25%	The pattern will be printed in scale 25%
Fit to Page	The pattern will be printed on 1 page
Scale:	The patterns will be printed in the custom set scale. When you fill in 100 % the printing can be more efficient then the placed patterns on the pages.
Yardage Grid	Yardage grid will be shown on the printing

Offset

Horizontal	moving the pattern horizontal on the printing area with a certain amount of increments
Vertical	moving the pattern vertical on the printing area with a certain amount of increments
Increment	the size of the step of offset

***Zoom*:**

Zoom +	Make the view of the drawing larger
Zoom -	Make the view of the drawing smaller

Unselect All	All pages will be shaded. Only the unshaded pages are printed.

No. of pages the necessary number of pages for printing the pattern is shown

The Tab **Print Options** has the following options**:**

Alignment Mark Choose whether you want the pages to print with alignment marks. The default is Yes.

Label Pages Choose whether you want the pages to print with labels (Row/Column and Filename). The default is Yes.

File Name Choose whether you want the pages to print with the file name. The default is Yes.

Print Rows first print row by row

Print Columns print column by column. When you use use banner or continuous-feed paper, check this.

Note: Printing a pattern may take lots of pages on a desktop printer, and require taping a lot of pages together. To avoid wasting paper, make sure your pattern has only the pieces you need and that they are as close together as possible. Use the MOVE, ROTATE *and* ERASE *to arrange the pieces for printing.*

Note: If you are using a macro, remember that you might need to leave room around the edges of the pieces to cut the seam allowances. Seam allowances are not always included on macro pattern pieces automatically. If you want to print the pattern with seam allowances and they are not included, use the OFFSET *or* SEAM ALLOWANCE *command before printing.*

See also:

All options in the Print Preview window

PRINT SELECT command

PRINT REGION command

PRINT SETUP command

Assembling Printed Pages

PRINT REGION command

The PRINT REGION command lets you select a rectangular area to print, rather than the entire drawing. All objects (or portions of objects) within the selected area will be printed.

Procedure:

1. Select the PRINT REGION command from the **File** menu. The prompt on the command line says `Enter a point, <ESC> to cancel`
2. Click **LM** on one corner of the area you wish to print -- for example, the upper left corner.
3. The prompt on the command line says `Second point, <ESC> to cancel`. As you move the mouse around, you will see the box changing shape. This box represents the area that will be printed.
4. When you have defined the area you want to print, click **LM** again. The Print Preview window will now open. Continue according to the PRINT instructions. The program will print as many pages as necessary to cover the area you selected.

Note: Also the objects that you did not select in the region, but fit on the pages to print will be printed.

See also:

PRINT SELECT command

Assembling Printed Pages

PRINT SELECT command

The PRINT SELECT command lets you choose one or more objects to print, rather than the entire drawing.

Procedure:

1. Select the PRINT SELECT command from the **File** menu. The prompt on the command line says: `Select Objects to Print:`
2. Click **LM** on one or more objects. Each piece that you select is highlighted. If you make a mistake, click on an object again to un-select it.
3. **To stop selecting objects,** click **RM**, or press the <ESC> key.
4. The Print Preview window will now open. Continue according to the PRINT instructions. The program will print as many pages as necessary to cover the object(s) you selected.

Note: Also the objects that you did not select, but fit on the pages to print will be printed.

See also:

PRINT REGION command

Assembling Printed Pages

PRINT MARKER command

PRINT MARKER prints the marker area. Like the PRINT command, it will print as many pages as necessary.

You can use the PRINT MARKER command from either the Draw Mode or the Marker Mode. In Draw Mode, all objects visible in the marker area will be printed. If an object's layer is turned off, it will not be printed. If the display is in Marker Mode, non-marker objects are not printed.

PRINT MARKER uses the same Print dialog boxes as the other printing commands.

See also:

PRINT MARKER REPORT command

MARKER MODE command

SET MARKER AREA command

PRINT MARKER REPORT command

PRINT MARKER REPORT sends a marker report to the printer. The marker report is described under the MARKER REPORT command (**Marker** menu).

PRINT MARKER REPORT uses the standard Windows Print dialog boxes. PRINT MARKER REPORT is available as a command on the **File** menu, or as an option under the MARKER REPORT command.

PRINT SETUP command

The PRINT SETUP command takes you to the Windows Print Setup dialog box. Here you can change which printer you are going to use, and also change the page orientation (Portrait to Landscape, or vice versa).

You can access this dialog box either from the **File** menu in the main drawing screen, or from the Print menu in the Print Preview window.

Make the changes you want, and then click the "OK" button.

See also:

Print Preview window

MACRO command

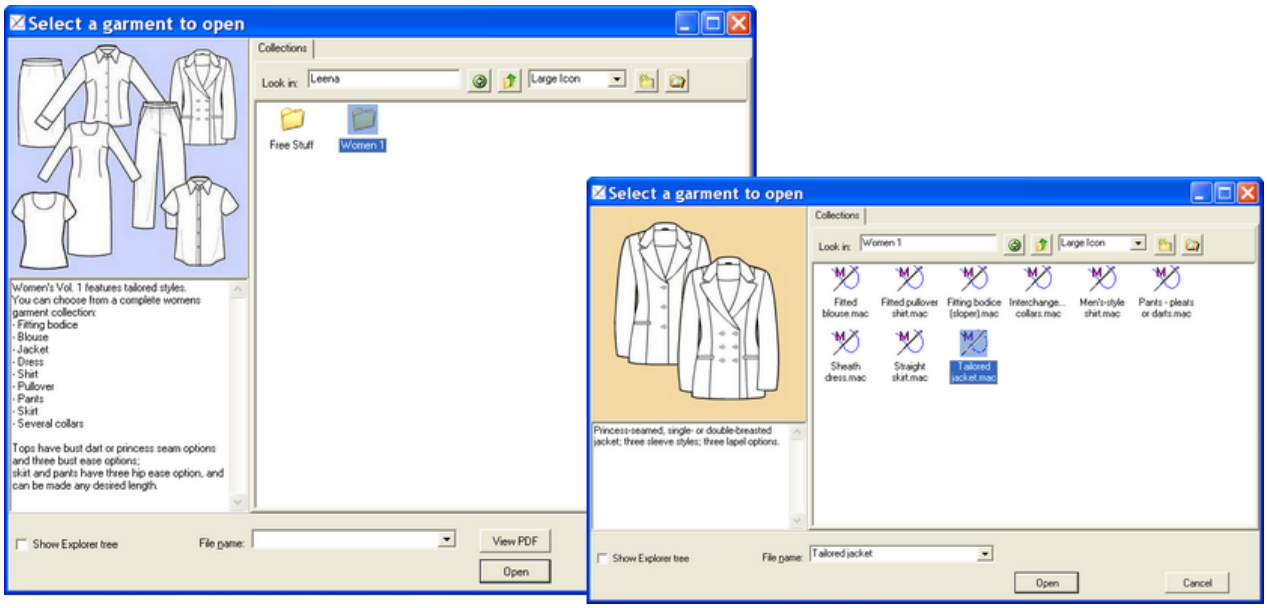
File -> Macro

The MACRO command runs a macro. Macros are small plug-in programs that run inside PatternMaker to create custom-fit patterns.

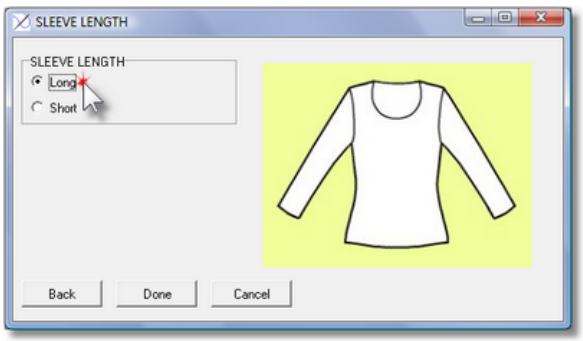
Before you run a macro, set up a personal measurement table.

Procedure:

1. Click on the Macro icon, or select "Macro" from the **File** menu.
2. The file browser opens. Select the designer, collection, and garment file that you want. The descriptions and focus pictures help you make your selection.



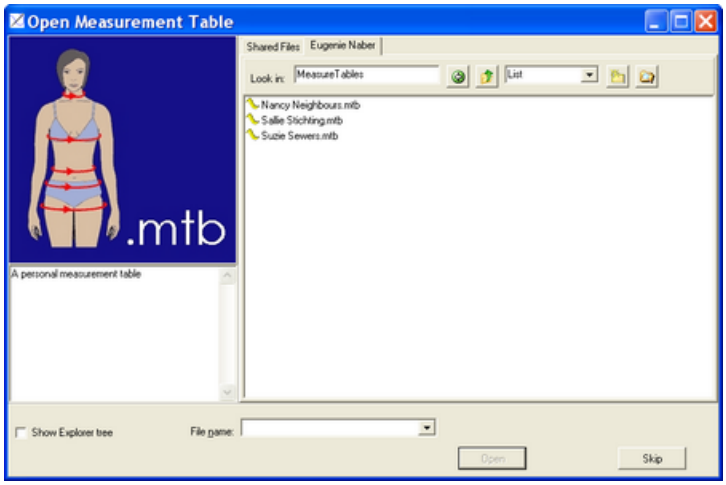
3. Select the macro you want to run and click the "OK" button. It may take a few seconds for PatternMaker to load the macro.
4. You will now see a series of dialog boxes which ask questions and offer choices. The choices are different for each macro. (For instance, for the women's dress, you will be asked if you want a sleeveless dress or one with sleeves.) To continue through the macro, use your mouse to click on one of the options. If you click "Cancel," the macro will abort and you will be returned to the drawing screen.



5. After you have made your choices, it's time to enter your measurements. You can either use a saved measurement table, or you can enter the measurements manually:

Using a Measurement Table

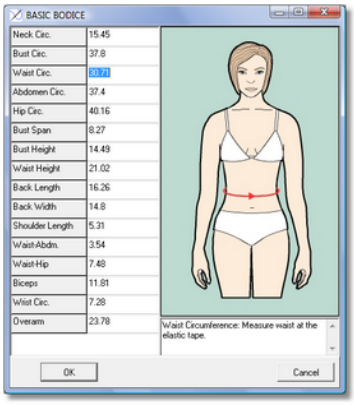
Select a measurement table and click the "Open" button. The measurements from this table will be "plugged into" the macro.



NOTE: The measurement tables are automatically filtered to show only the tables matching the designer whose macro you are running. If you don't see a table that you expect to see, make sure you've saved a measurement table for the correct designer.

Entering Measurements Manually

If you are not using a saved measurement table, click the "Skip" button to bypass the dialog box. The macro will then display a dialog box into which you can enter your measurements manually.



Some macros may have two dialog boxes for measurements. Fill these in from your *measurement chart*. Remember to use decimal numbers, so 8-3/4 inches is 8.75 inches and so forth. (Use the Fraction Conversion Chart for help.) Be careful to enter the right numbers in the right spaces. When you are ready to continue, click the "OK" button.

6. While the macro is running, the mouse pointer icon turns into an hourglass. You may have to wait for the macro to run, especially if you do not have a fast computer, or if the macro you are using is particularly complicated. You will know the macro is done when the hourglass cursor changes back to an arrow and the prompt `Command:` appears on the status bar.

IF YOU CANNOT SEE THE PATTERN PIECES, OR IF YOU ONLY SEE PART OF THEM, PRESS THE <END> KEY TO VIEW ALL THE PIECES IN THE DRAWING.

The macro will draw your new pattern in the drawing area. If there is a drawing on the screen when you run a macro, the macro will be *added to* what is on the screen. It may overlap existing pattern pieces. If this happens you can use the MOVE command to move things around. Use the ZOOM and PAN commands to view different parts of the drawing.

A macro can be run as many times as you wish. You can reuse your own measurement table, or you can create new tables for many different people.

Once the macro has created the pattern on the screen, the drawing can be saved as a **.PAT** file, to be opened and printed again later. With the PatternMaker Deluxe Editor or higher, you can also edit the .PAT file, although editing the pattern does not change the body measurements used in the garment. To change the measurements used, run the macro again.

See also:

Set start locations

EXIT command

The Exit command closes the PatternMaker program. If there is a drawing open, you will be given a chance to save it.

6.2 Draw Menu Commands

The **Draw** menu contains commands used to create various objects in your drawing. Everything in your drawing is an object – the outline of a bodice piece is an object, the arrow showing the grainline is an object, and the text that says "Bodice Front" is an object.

DIM command

Draw -> Dim

This command draws dimension lines. Dimensions are one of the four kinds of objects in PatternMaker. A dimension object has two arrows indicating two points, and some numbers giving the distance between the points. If you ever change or resize a dimension object, its length is recalculated and the numbers are updated.

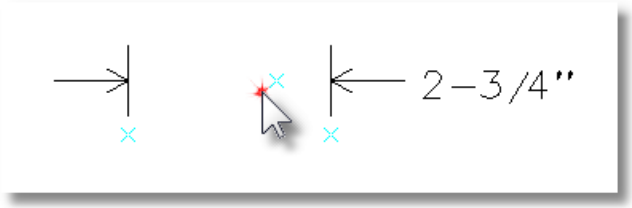
Procedure:

1. Click on the Dim icon, or select "Dim" from the **Draw** menu. The prompt on the command line says: `Select first point:`.
2. Click on the screen with LM or type a position in coordinate format to indicate the start point of the dimension line. This would usually be a point on one end of the line or object you want to measure. The prompt on the command line says: `Select second point:`.
3. Click on the screen with LM or type a position in coordinate format to indicate the end point of the dimension line (a point on the other end of the line or object). The prompt on the command line says: `Location for label:`
4. As you move the mouse around, you can see where the label will be placed. Click on the screen when the label is positioned where you want it. The text will be automatically inserted indicating the distance between the two points.

If you want to cancel the command without drawing the rectangle, click RM or one or a few times <ESC> until the command name is purple and you can read on the command line : `Cancel Command`
If the Right mouse Context menu is set On (in Settings/Configure default) after clicking **RM**, or press <ESC> you

will get a menu to choose from. Select Cancel command.

Note: It is often convenient to use Snap To End Point to place Dimension lines next to objects you want to measure. See SNAP Commands for more details.



Note: You can change the appearance of the DIM units, including the size of the text and the length of the arrows. See the DIM SETTINGS and UNITS commands for more details.

DIM is used for measuring between two points in a straight line. To measure along a curve, use SET/MEASURE DISTANCE.

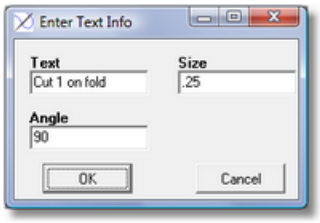
TEXT command

Draw -> Text

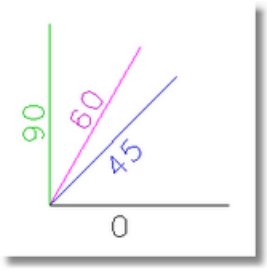
The TEXT command inserts a label (words or numbers) into your drawing. Text is one of the four types of objects in PatternMaker.

Procedure:

1. Click the Text icon, or select "Text" from the **Draw** menu. The command name TEXT will appear in **green** on the right side of the status bar. The prompt on the command line says `Select a point (selection done is RightMouse) :`
2. Click **LM** to indicate where you want the text to begin. After you click, the Text dialog box opens:



3. Enter the following information:
   - Text: the contents of the Text object -- what you want it to say
   - Size: the height of the text, in whatever measurement units you are using. Remember that the text height is measured in inches or cm, not in point size. For reference, one inch is 72 points; 18 point text is .25".
   - Angle: the angle at which you want the text drawn. This is measured from a horizontal line:



4. Click the "OK" button to return to the drawing screen. The text is drawn at the angle you specified, in whatever font is currently selected in the *Font* drop-down box on the status bar.

Once a text object is inserted in the drawing, you can use CHANGE TEXT to change the size, rotation or the content of the text itself. Use CHANGE FONT to change the typeface of an existing text object.

If you want to cancel the command without adding text, click **RM**, or press <ESC> until the command name is purple and you can read on the command line : `Cancel Command`
If the Right mouse Context menu is set On (in Settings/Configure default) after clicking **RM**, or press <ESC> you will get a menu to choose from. Select Cancel command.

See also:

Configure: FONT

POLY command

Draw -> Poly

The POLY command draws polygons. Polygons are one of the four kinds of objects in PatternMaker. A polygon object can be any arbitrary shape, and can have both straight and curved segments. Polygons can be either open or closed.

Procedure:

1. Click the Poly icon, or select "Poly" from the **Draw** menu. The prompt on the command line says `Enter first point (R Mouse for menu):`
2. Enter each point by clicking **LM**, or by entering a position in coordinate format.
3. Click **RM** or press the <ESC> key to open the Poly Options menu (see list below). Use these options to make curves, undo points, or end the polygon.
4. To finish drawing the polygon, click **RM** and select either "Done (Closed)" or "Open (Done)" from the Poly Options menu.

Options:

- *Line* (the default) -- This draws straight lines.
- *Tangent line* -- This draws a line, but it forces this line to continue in the direction established by the previous segment. After you click to end the tangent segment, the option reverts to Line.
- *Perpendicular line* -- This draws a line, but it forces this line to be at a right angle to the previous segment. After you click to end the perpendicular segment, the option reverts to Line.
- *Arc* -- This begins an xarc. The next point you input will be the corner (control) point, and the point after that will be the end point of the xarc.
- *Automatic arc* -- This begins an xarc, but you don't need to input a corner point. Instead, you input the end point and PatternMaker places the corner point. It does this such that the arc is tangent to the previous

segment of the object. This is useful for drawing complicated curves that consist of several xarcs end-to-end.

- *Arc through point* -- This also begins an xarc. The difference is that the next point you select is not the corner point. Instead, PatternMaker calculates the corner point so that the arc will go through the point you selected. This is especially useful when "tracing" a pattern with a digitizing pad.

- *No notch* -- Draws the next point without any notch mark (this is only used to unselect one of the following notch, tab or buttonhole options).
- *Notch* -- Draws the next point as a notch mark (used to line pieces up when you sew them together).
- *Dbl. notch* -- Draws the next point as a double notch.
- *Tab* -- Draws the next point as a tab.
- *Wide tab* -- Draws the next point as a wide tab.
- *Buttonhole* -- Draws the next point as a buttonhole.

see examples

- *Done (Closed)* -- This finishes drawing the object and makes it a closed polygon.
- *Open (done)* -- This finishes drawing the object and makes it an open polygon.
- *Cancel* -- This cancels the command and gets rid of the partially drawn object.
- *Undo last point* -- This removes the last point you drew, then lets you continue from there.

The notch, tab and buttonhole options only apply to the next point you draw. To draw more notch marks, you need to reselect the option. For the other options (line, arc, etc.), once you select an option, it stays in effect until you select another option.

If you want to cancel the command Poly you click **RM** or press <ESC> and select Cancel in the Poly Options menu.

See also:

Setting drawing preferences
CHANGE OBJECT command
LAYER command
NOTCH command

RECT command

Draw -> Rect

This command draws a rectangle (or square), a polygon object with four points. You can use the various editing commands to change a rectangle, just like any other object.

Procedure:

1. Click on the Rect icon, or click "Rect" on the **Draw** menu. The command name RECT will appear in **green** on the right side of the status bar. The prompt on the command line says `Select first point:`
2. Enter one point of the rectangle (for example, top left) by clicking **LM**, or by entering coordinates , followed by clicking the <ENTER>.
   The prompt on the command line says `Select diagonal corner:`
3. Enter the opposite corner of the rectangle (for example, bottom right) by clicking **LM** or by entering coordinates, followed by <ENTER>.

4. You can tell you are finished with the command when the command name RECT on the status bar returns to ***purple***.

If you want to cancel the command without drawing the rectangle, press <ESC> or click **RM** until the command name is purple and you can read on the command line : `Cancel Command`
If the Right mouse Context menu is set On (in Settings/Configure default): after clicking **RM**, or press <ESC> you will get a menu to choose from. Select Cancel command.

See also:

Setting drawing preferences
CHANGE OBJECT command

LINE command

Draw -> Line

The LINE command draws a line. A line is a polygon object with two points. You can use the various editing commands to change a line, just like any other object.

Procedure:

1. Click the Line icon, or select "Line" from the **Draw** menu. The command name LINE will appear in **green** on the right side of the status bar. The prompt on the command line says `First point:`
2. Enter the first point of the line by clicking **LM** or by typing a position in coordinate format. The prompt on the command line says `Enter end point:`
3. Enter the second point by clicking **LM** or by typing a position in coordinate format
4. You can tell when you are finished with the command when the command name LINE on the status bar returns to ***purple***.

If you want to cancel the command without drawing a line, click **RM**, or press <ESC> until the command name is purple and you can read on the command line : `Cancel Command`
If the Right mouse Context menu is set On (in Settings/Configure default) after clicking **RM**, or press <ESC> you will get a menu to choose from. Select Cancel command.

See also:

Setting drawing preferences
CHANGE OBJECT command

CIRCLE command

Draw -> Circle

The CIRCLE command draws a circle. A circle is a polygon object with four curved segments and eight points. You can use the various editing commands to change a circle, just like any other object.

Procedure:

1. Click on the Circle icon, or select "Circle" from the **Draw** menu. The command name CIRCLE will appear in **green** on the right side of the status bar. The prompt on the command line says `Select the center point:`.
2. Enter a point for the center of the circle either by clicking **LM** or by typing a position in coordinate format. The prompt on the command line says `Type radius of circle or select point:`.

3. Click **LM** to select a point on the perimeter, or type in a radius. The radius of a circle is the distance from the center to the edge.
4. You can tell when you are finished with the command when the command name CIRCLE on the status bar returns to ***purple***.

If you want to cancel the command without drawing a circle, click **RM**, or press <ESC> until the command name is purple and you can read on the command line : `Cancel Command`
If the Right mouse Context menu is set On (in Settings/Configure default) after clicking **RM**, or press <ESC> you will get a menu to choose from. Select Cancel command.

See also:

COMPASS command
CHANGE OBJECT command
Setting drawing preferences

COMPASS command

Draw -> Compass

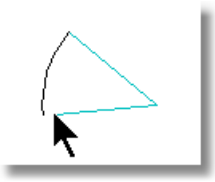
The COMPASS command draws an arc (a portion of a circle).

NOTE: An arc drawn with the COMPASS command is drawn as a series of short line segments, rather than as a single X-arc segment with a corner control point, as drawn with the POLY command.

Procedure:

1. Click the Compass icon, or select "Compass" from the **Draw** menu. The command name COMPASS will appear in **green** on the right side of the status bar. The prompt on the command line says `Enter a center point:`
2. Click **LM** once to indicate the center of the circle. The prompt on the command line says `Enter distance:`
3. Enter the next point in one of two ways:
   - Click **LM** to indicate where the perimeter of the circle is. This will form one end of the arc.
   - Type a number to indicate the radius of the circle (there's no cursor on the command line, and you don't have to click there -- just type the number), and press <ENTER>. If you choose this method, you will then see an extra prompt saying `Click for arc start point:` This is the same as clicking on the perimeter.

   The prompt on the command line now says: `Enter arc angle (CCW):`
4. Enter the end of the arc in one of two ways:
   - Move the mouse around until the arc looks the way you want it, then click **LM**.
   - Type a number on the command line to indicate the width of the angle you want (in degrees), and press <ENTER>. The angle is measured counterclockwise from your start point.



5. You can tell when you are finished with the command when The command name COMPASS on the status bar returns to ***purple***.

If you want to cancel the command without drawing a portion of a circle, click **RM**, or press <ESC> until the command name is purple and you can read on the command line : `Cancel Command`
If the Right mouse Context menu is set On (in Settings/Configure default) after clicking **RM**, or press <ESC> you will get a menu to choose from. Select Cancel command.

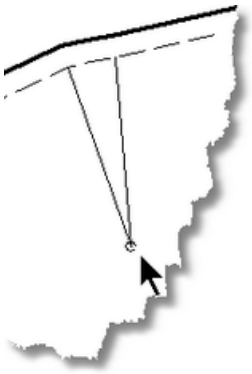
See also:

- CIRCLE command
- CHANGE OBJECT command
- Setting drawing preferences

DOT command

Draw -> Dot

The DOT command draws a dot. A dot is a polygon object with only one point. It can be used to match two pattern pieces together. The dot is drawn as a small circle, using the current COLOR.



Procedure:

1. Select "Dot" from the **Draw** menu.
2. Click **LM** in the drawing to place the dot, or type a location using coordinates.

You can change the size of the dot with the Dot Width setting on the *Program Settings* tab of the Configure form. The Configure form is found on the **Settings** menu.

Caution: Not all printers print dots the same way they appear on your screen. Make sure your printer can print dots before you use very many of them in your drawing.

CONTINUE command

Draw -> Continue

The CONTINUE command allows you to draw a new line segment which continues the direction of an existing line segment. This has the same effect as using the *tangent* option of the POLY command, except that with CONTINUE you can add to an object that already exists.

Procedure:

1. Click the Continue icon, or select "Continue" from the **Draw** menu. The command name CONTINUE will appear in **green** on the right side of the status bar. The prompt on the command line says `Select`

`segment:`

2. Click **LM** on the segment to extend. With this command you can only select one segment at a time, so if you click on a second segment, it replaces the first.
3. When you have selected the correct segment, click **RM** . If the Right mouse Context menu is set On you will get a menu to choose from. Select **Done Selecting**.
   The prompt says `Draw direction and enter segment length:`
4. As you move the mouse around, you can see the new line appearing on either side of the existing segment. Point the mouse in the direction you want the new line, and then either click LM or type a length. The length is measured from the object's vertex that was closest to the mouse.

   Note: *This is one PatternMaker command that cannot be completed without a mouse. You must use the mouse to indicate on which side of the object you want the new line segment.*

If you want to cancel the command without adding text, click **RM**, or press <ESC> until the command name is purple and you can read on the command line : `Cancel Command`
If the Right mouse Context menu is set On (in Settings/Configure default) after clicking **RM**, or press <ESC> you will get a menu to choose from. Select Cancel command.

RIGHT ANGLE command

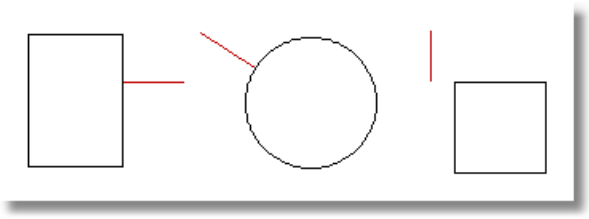
Draw -> Right Angle

Use this command to draw a line at a right angle to an existing line segment.

Procedure:

1. Click on the Right Angle icon, or click "Right Angle" on the **Draw** menu. The command name RIGHT ANGLE will appear in **green** on the right side of the status bar. The prompt on the command line says `Select segment:`
2. Click on the segment you want to draw the right angle from. You can only select one segment at a time, so if you click on a second segment, the first is unselected.
3. When you have selected the segment you want, click **RM** or press the <ESC> key. If the Right mouse Context menu is set On you will get a menu to choose from. Select **Done Selecting**.
   The prompt on the command line says `Click for start point:`
4. Click **LM** at the location where the right angle will begin. You can click "by eye," or use one of the Snap modes, such as Snap to Midpoint, to help select the correct location. Note that this location does not have to connect to the existing object (see third example in the illustration below).
5. After you click, the prompt on the command line says `Draw direction and enter segment length:` As you move the mouse around, a new line will follow, drawn at a right angle to the selected segment. The line may end up on either side of the segment, depending on where the mouse pointer is.
6. Once the new line is pointed the right direction, you can type a number for the line length, or simply click when the line looks the way you want it.
7. You can tell you are finished with the command when the command name RIGHT ANGLE on the status bar returns to ***purple***.

If you want to cancel the command without drawing the rectangle, click **RM**, or press <ESC> until the command name is purple and you can read on the command line : `Cancel Command`
If the Right mouse Context menu is set On (in Settings/Configure default) after clicking **RM**, or press <ESC> you will get a menu to choose from. Select Cancel command.



OFFSET command

Draw -> Offset

The OFFSET command creates a polygon object that is offset a certain distance from an existing polygon. This is useful for creating fixed-width seam allowances. You can offset both open and closed polygons, and you can put the offset on either the inside or the outside of the selected object(s).

Procedure:

1. Click on the Offset icon, or click "Offset" on the **Draw** menu. The command name OFFSET will appear in **green** on the right side of the status bar. The prompt on the command line says `Select object to offset:`
2. Click **LM** on the object you want to add seam allowance to. You can only select one object at a time. The command line will keep you informed as objects are selected and unselected.
3. If you are **done with selecting objects** click **RM** .
   If the Right mouse Context menu is set On you will get a menu to choose from. Select **Done Selecting**.
   An "Offset Distance" dialog box will appear.
4. Enter the amount of seam allowance you want. Remember to use decimal numbers, not fractions. (See the Fraction Conversion Chart for help.) A positive number will draw the offset outside the original object; a negative number will put the offset object inside the original object.
5. Click the "OK" button. A seam allowance will be drawn around the selected piece.

If you want to cancel the command without drawing offset, click **RM**, or press <ESC> until the command name is purple and you can read on the command line : `Cancel Command`
If the Right mouse Context menu is set On (in Settings/Configure default) after clicking **RM**, or press <ESC> you will get a menu to choose from. Select Cancel command.

The offset object, once drawn, is an object separate from the original object. You can do any of the things with it that you can do with any other PatternMaker drawing object.

After the offset object is drawn, you can use the CHANGE OBJECT command to change the line style of one of the objects. This can be useful, for example, if you want to indicate a stitching line by using a dashed or dotted line.

NOTE: *The* OFFSET *command may not work well for objects that contain sharp angles or inward bends, or that overlap or cross over themselves. Most normal pattern pieces will not have this problem unless they contain darts. One way to avoid this problem is to draw the dart as a separate object from the main pattern piece. Checking the Offset lines box in Configure is important for drawing a precise offset*
Try changing the OFFSET LINES setting.

HINT: Use ID POINT if you think your object may have "hidden" kinks or stray vertices.

See also:

SEAM ALLOWANCE command
CHANGE OBJECT command

SEAM ALLOWANCE command

Draw -> Seam Allowance

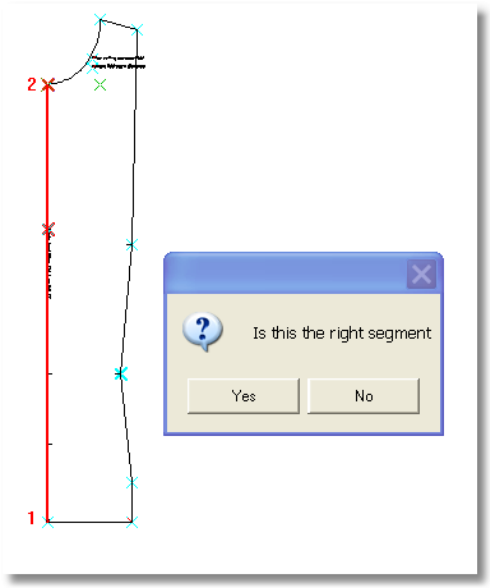
The SEAM ALLOWANCE command adds a seam allowance to an object. You can vary the width of the seam allowance as it goes around the object. You can add seam allowances to both open and closed polygons, and you can put the seam allowance on either the inside or the outside of the selected object(s).

Note that the SEAM ALLOWANCE command always uses the OFFSET LINES setting.

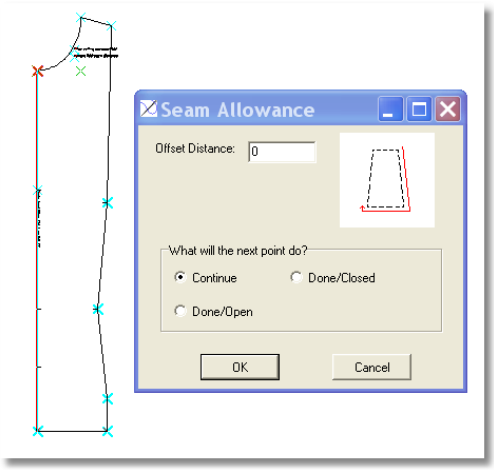
Procedure:

1. Click "Seam Allowance" on the **Draw** menu. The prompt on the command line says `Select first point:`.
2. Click **LM** on the vertex of a polygon object where you want the seam allowance to begin. If you make a mistake, just click another point to replace the first. The command line keeps you informed as points are selected and unselected.
3. When you have selected the point you want to start with, click **RM** or press the <ESC> key. If the Right mouse Context menu is set On you will get a menu to choose from. Select **Done Selecting**.
   The prompt on the command line says `Select end of segment:`.
4. Click **LM** on a second point of the same object and then click **RM** or press the <ESC> key again. If the Right mouse Context menu is set On you will get a menu to choose from. Select **Done Selecting**.

   These two selected points define the segment to which the seam allowance will be added.
   PatternMaker highlights the section connecting these two points(see line between point 1 and 2) and asks you if it is the right section.
   (The program needs to know whether to go clockwise or counterclockwise around the object.)
   If you click "Yes" the command will continue; if you click "No" the program will highlight the section of the object in the opposite direction and repeat the question.



5. Next, a dialog box appears, asking you for the Offset Distance.



Enter in the box Offset Distance the width of the seam allowance for this section.
A positive number will draw the offset outside the original object; a negative number will draw the offset inside the original object.
Remember to use decimal numbers, not fractions (see the Fraction Conversion Table).
If you fill in 0 the offset will be zero, which you can use at the fold of the fabric.

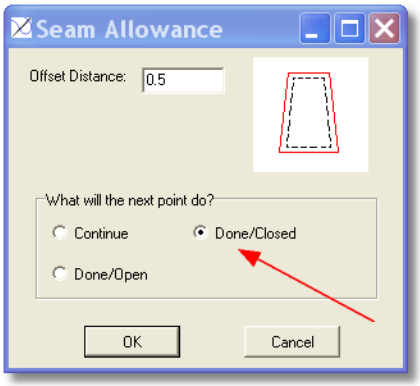
6. To exit the dialog box, answer the question "What will the next point do?"
   Choose one of the three option buttons, which will reflect on **the next point that will be selected in the pattern**:

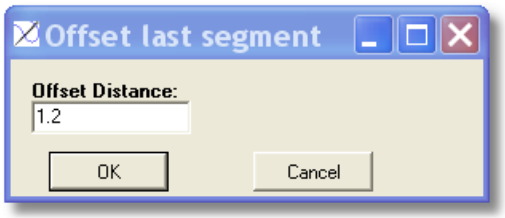
   Continue: the seam allowance filled in in the box Offset Distance is added to the selected segment. Click the "OK" button to return to the drawing screen to select the next point of the segment and continue making a seam allowance. Steps 4 and 5 will be repeated until you select one of the "Done" options.

   Done/ Closed: with the next point the seam allowance is made into a closed object -- in other words, it continues all the way around the original object at the width you specified and you are back at the first point.

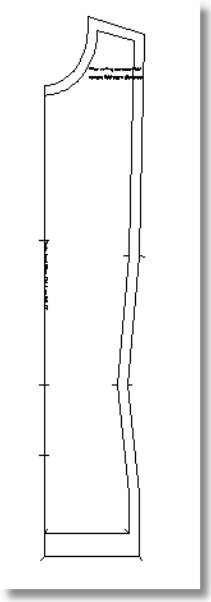
   Done/ Open: the seam allowance ends just as it is (an open object)

7. Click the "OK" button to accept the settings and return to the drawing screen to select the next segment; click "Cancel" to abort the command.
8. When you have selected Done/Closed an **Offset last segment form** appears to fill in the Offset Distance of the last segment of the pattern.





9. PatternMaker will finish the Seam Allowance and draw all seam allowances according to the distances you have filled in.



After the seam allowance is drawn, you can use the CHANGE OBJECT command to change the line style of one of the objects. This can be useful, for example, if you want to indicate a stitching line by using a dashed or dotted line.

The seam allowance object, once drawn, is an object separate from the original object. You can do any of the things with it that you can do with any other PatternMaker drawing object.

NOTE: *The* SEAM ALLOWANCE *command may not work well for objects that contain sharp angles or inward bends, or that overlap or cross over themselves. Most normal pattern pieces will not have this problem unless they contain darts. One way to avoid this problem is to draw the dart as a separate object from the main pattern piece.*

> ***HINT:*** *Use ID POINT if you think your object may have "hidden" kinks or stray vertices.*

See also:

OFFSET command
SNAP TO OFFSET

FACING command

Draw -> Facing

Use FACING to draw a facing that is the same width along its entire length, such as for a collar or armscye.

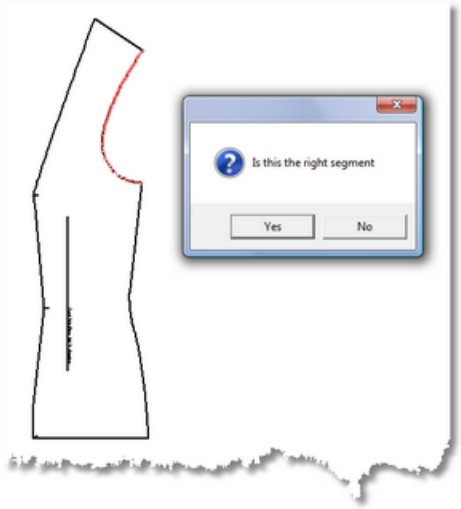
> ***Tip:*** *Change the active fill color and/or pattern before beginning this command. The new facing will be easy to see and identify.*

Procedure:

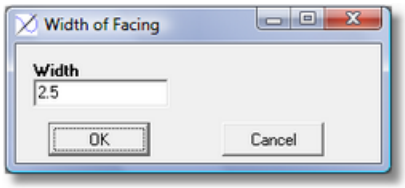
1. Click the Facing icon, or select "Facing" from the **Draw** menu. The command name FACING will appear in **green** on the right side of the status bar. The prompt on the command line says `Select first point of segment:`
2. Click **LM** on the vertex where you want the facing to begin. The point turns red as it is selected. You can only select one point at a time, so if you click on a second, it replaces the first.

> ***Tip:*** *Turn on Snap To Endpoint to help select these vertices.*

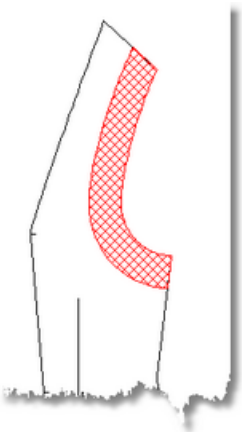
3. **When you have the correct point selected**, click **RM** or press the <ESC> key. If the Right mouse Context menu is set On you will get a menu to choose from. Select **Done Selecting**.
   The prompt on the command line says `Select end of segment:`
4. Click **LM** on the vertex where the facing will end. Again, you can only select one point at a time.
5. Click **RM** when you have selected the second point. If the Right mouse Context menu is set On you will get a menu to choose from. Select **Done Selecting**.
   PatternMaker highlights the section connecting these two points and asks you if it is the right section. (The program needs to know whether to go clockwise or counterclockwise around the object.) If you click "Yes" the command will continue; if you click "No" the program will highlight the section of the object in the opposite direction and repeat the question.



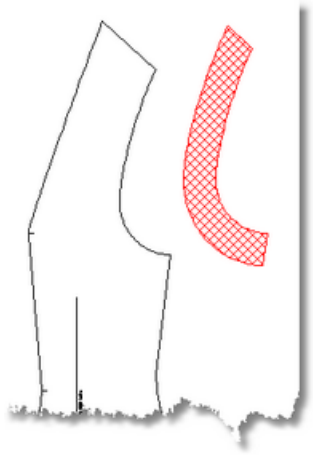
6. Next, a dialog box appears, asking you for the width of the facing:



Enter the width you want for the facing. Remember to use decimal numbers, not fractions (see the Fraction Conversion Table). Click the "OK" button to return to the drawing screen.



Note: *The facing is drawn as a new object overlapping the original pattern piece. You will probably want to move the new facing piece to a different location before you print the pattern.*



See also:

CURVED FACING command
MOVE command
Setting drawing preferences

CURVED FACING command

Draw -> Curved Facing

Use CURVED FACING to draw a facing that has a different width at each end, such as for the opening edge of a blouse at the mid front.

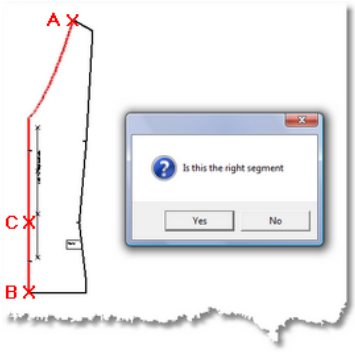
> ***Tip:*** *Change the active fill color and/or pattern before beginning this command. The new facing will be easy to see and identify.*

Procedure:

1. Click the Curved Facing icon, or select "Curved Facing" from the **Draw** menu. The command name CURVED FACING will appear in **green** on the right side of the status bar. The prompt on the command line says `Select first point of segment:`
2. Click **LM** on the vertex where you want the facing to begin (**Point A** in picture). The point turns red as it is selected. You can only select one point at a time, so if you click on a second, it replaces the first.

   > ***Tip:*** *Turn on Snap To Endpoint to help select these vertices.*

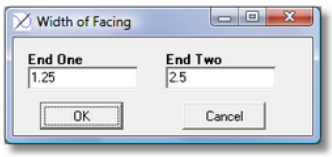
3. **When you have the correct point selected**, click **RM** or press the <ESC> key.
   If the Right mouse Context menu is set On you will get a menu to choose from. Select **Done Selecting**.
   The prompt on the command line says `Select end of segment:`
4. Click **LM** on the vertex where the curved part of the facing will end. This can be for instance on the hemline (**point B**) or higher (**point C**) if you want to make from that vertex a straight facing downwards. Again, you can only select one point at a time.



Click **RM** when you have selected the second point. If the Right mouse Context menu is set On you will get a menu to choose from. Select **Done Selecting**.

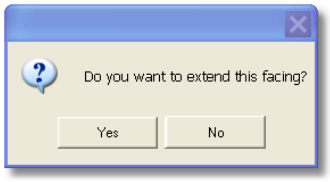
PatternMaker highlights the section connecting these two points and asks you if it is the right segment.
(The program needs to know whether to go clockwise or counterclockwise around the object.) If you click "Yes" the command will continue; if you click "No" the program will highlight the section of the object in the opposite direction and repeat the question.

5. Next, a dialog box appears, asking you for the width of the facing:



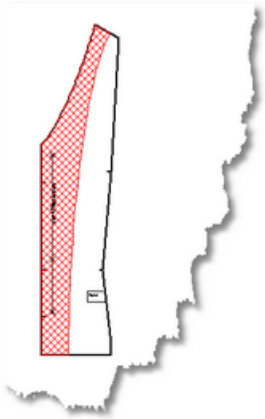
The first value is the width for the beginning of the segment; the second value is for the width at the end of the segment. Remember to use decimal numbers, not fractions (see the Fraction Conversion Table). Click the "OK" button to return to the drawing screen.

6. If you had selected **point C** the program will ask you now if you want to extend the facing further (downwards, to the hemline)?

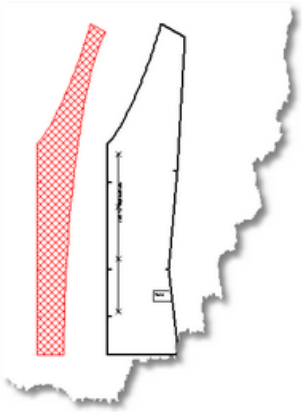


Click Yes when you want to extend the facing to the bottom.

PatternMaker will draw a separate curved facing, exactly following the curved part of your drawing.



Note:
The facing is drawn as a new object overlapping the original pattern piece. You will probably want to move the new facing piece to a different location before you print the pattern.



See also:

FACING command
MOVE command

Setting drawing preferences

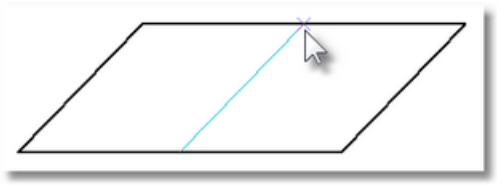
PLEAT command

Draw -> Pleat

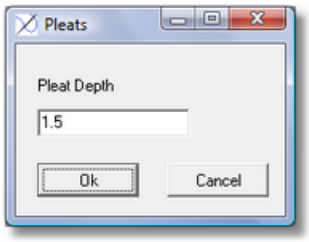
Use the PLEAT command to mark and insert a pleat into your pattern.

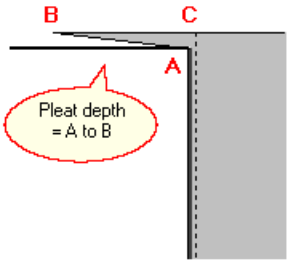
Procedure:

1. Click the Pleat icon, or select "Pleat" from the **Draw** menu. The command name PLEAT will appear in **green** on the right side of the status bar. The prompt on the command line says `Select object, ? for help, <ESC>=done:`
2. Click **LM** on the piece to be pleated. You can only select one object at a time, so if you click on a second, it replaces the first.
3. **When you have the correct object selected**, click **RM** or press the <ESC> key. If the Right mouse Context menu is set On you will get a menu to choose from. Select **Done Selecting**.
   The prompt on the command line says `Enter a point, <ESC> to cancel:`
4. Click **LM** at the location where the pleat will be inserted. The mouse cursor behaves as in Snap To Nearest mode -- you can only select a location on a line segment. You can combine this with another Snap mode to help you put the pleat in the right place, such as Snap to Midpoint, Snap to Endpoint, or Snap to Measured Distance. After you click, the prompt on the command line says `Second point, <ESC> to cancel:`
5. Click **LM** on the line segment that will be at the other end of the pleat. Again, you can use a Snap mode for this, such as Snap to Endpoint or Snap Orthol.

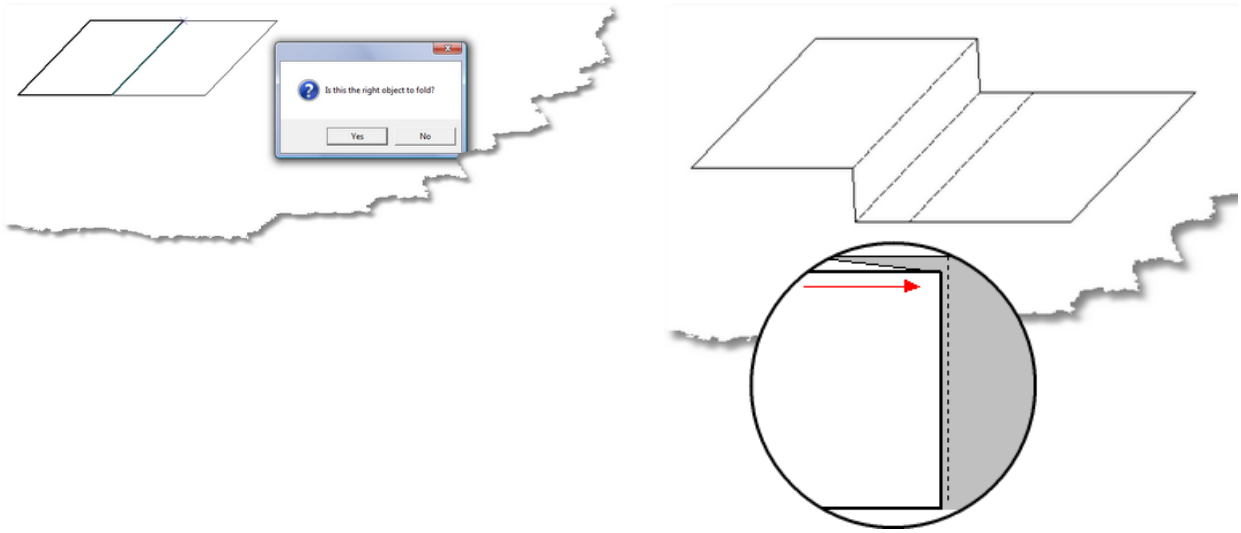


After you click, the Pleat dialog box opens:



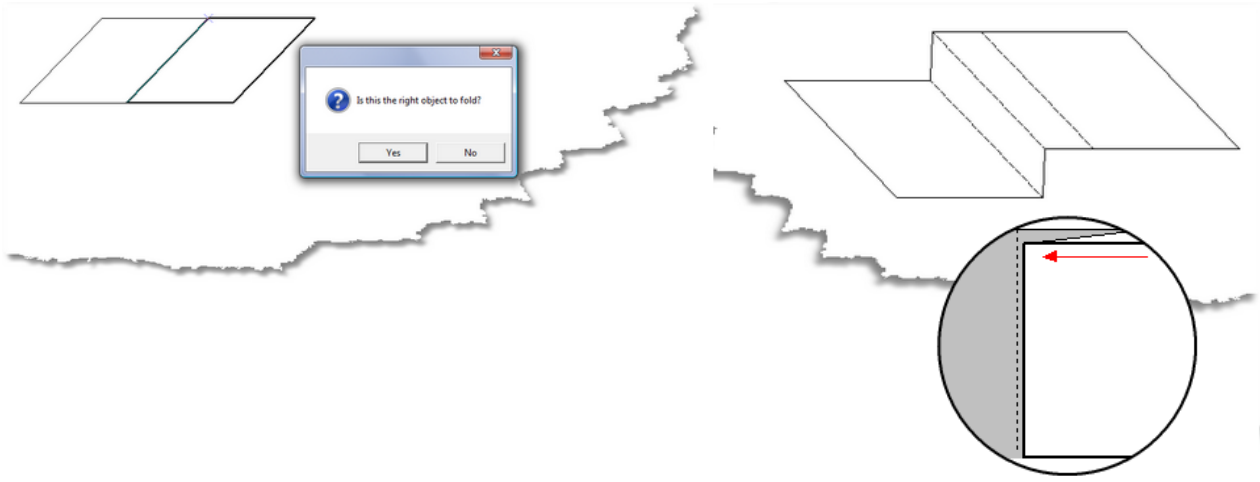


6. Enter the depth you want for the pleat. This is the *amount that will be folded over,* or *the amount that needs to be inserted.* When you're ready to continue, click the "OK" button.
7. One side of the object is highlighted. A confirmation message asks you if it is the right section to fold. The side to fold is the part you would pick up and move toward the other side.



Pleat folded to the right

If you click "No" the program will highlight the other side of the object and repeat the question.



Pleat folded to the left

8. When you click "Yes" the command is finished, and the pleat is inserted.

For a row of pleats, just click on the object again. This effectively returns you to Step 3, above.

See also:

HALF PLEAT command

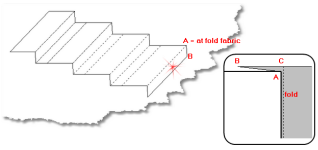
Using Snap modes

HALF PLEAT command

Draw -> Half Pleat

This command makes a pleat with only one pleat depth, used at the mid front or mid back of a pattern (at the fold of the fabric).

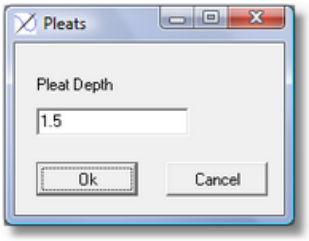
The half pleat is mostly needed at mid front or mid back when it finishes a row of whole pleats. Because the pattern is laying at mid front/mid back at the fold of the fabric the other necessary pleat depth is coming from the other side of the pattern.

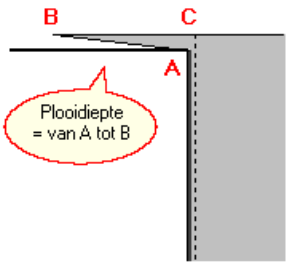


In a row of pleats you need at the fold of the fabric only one pleat depth

Procedure:

1. Click the Half Pleat icon, or select "Half Pleat" from the **Draw** menu. The command name HALF PLEAT will appear in **green** on the right side of the status bar. The prompt on the command line says `Select segment for pleat:`
2. Click **LM** on the segment where the half pleat will be added (this segment can only be a straight line without points on it). The segment turns red as it is selected. You can only select one segment at a time, so if you click on a second, it replaces the first.
3. **When you have the correct segment selected**, click **RM** or press the <ESC> key. If the Right mouse Context menu is set On you will get a menu to choose from. Select **Done Selecting**.
   The pleat dialog box opens:





4. Enter the depth you want for the pleat. This is the *amount that will be folded over,* at the end of the row of pleats.
5. When you're ready to continue, click the "OK" button. The half pleat is added to the edge of the piece.

See also:

PLEAT command

Using Snap modes

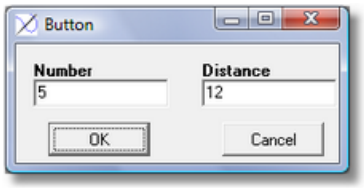
BUTTON LINE command

Draw -> Button Line

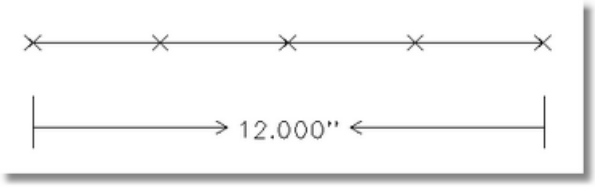
Use the BUTTON LINE command to quickly mark the locations of a number of evenly-spaced buttons.

Procedure:

1. Click on the Button Line icon, or select "Button Line" from the **Draw** menu. The command name BUTTON LINE will appear in **green** on the right side of the status bar. The prompt on the command line says `Enter a point; <ESC> to cancel:`
2. Click **LM** at the location you want the buttons to begin. After you click, the "Button" dialog box opens:



3. Type the number of buttons you want to mark, and the length of the entire button line. The buttons will automatically be evenly distributed over the length of the line.
4. When you are finished, click the "OK" button to return to the drawing screen. The button line is inserted as a vertical line, extending downward from the location that you indicated. The resulting line can be moved or rotated in any direction.



See also:

ROTATE command

MOVE command

DART command

Draw -> Dart

Use the DART command to "true" a dart; it draws the dart cap and joins it to the main pattern piece.

Procedure:

1. Click on the Dart icon, or select "Dart" from the **Draw** menu. The command name DART will appear in **green** on the right side of the status bar. The prompt on the command line says `Enter point to fold:`
2. Click **LM** on the vertex at the side of the dart that will be folded/moved toward the other side of the dart. This is usually the side of the dart that is lower on the body (for a roughly horizontal dart) or to the outside of the body (for a roughly vertical dart). The point turns red as it is selected. You can only select one point at a time, so if you click on a second, it replaces the first.

> ***Tip:*** *Turn on Snap To Endpoint to help select these vertices.*

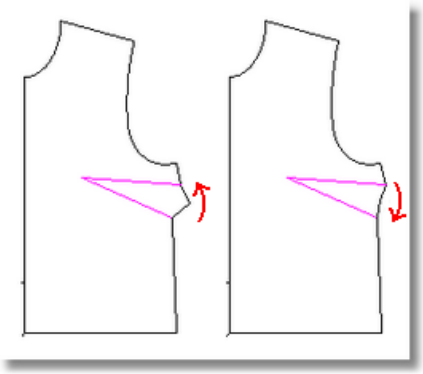
3. **When you have the correct point selected**, click **RM** or press the <ESC> key. If the Right mouse

Context menu is set On you will get a menu to choose from. Select **Done Selecting**.
The prompt on the command line says `Enter point to fold to:`

4. Click **LM** on the vertex at the opposite side of the dart opening. Again, you can only select one point at a time.
5. Click **RM** when you have selected the second point. If the Right mouse Context menu is set On you will get a menu to choose from. Select **Done Selecting**.
   The prompt on the command line says `Enter dart apex:`
6. Click **LM** on the vertex at the apex (the point) of the dart.

If you want to cancel the command without closing the dart, click **RM**, or press <ESC> until the command name is purple and you can read on the command line : `Cancel Command`
If the Right mouse Context menu is set On (in Settings/Configure default) after clicking **RM**, or press <ESC> you will get a menu to choose from. Select Cancel command.

Note that the dart cap will be shaped differently, depending on which side you select to fold. This depends on the configuration of the dart area, and the difference may not always be noticeable. If the dart cap result is not what you intended, try repeating the command, folding the dart the other direction.



6.3 Edit Menu Commands

PatternMaker has many editing commands that allow you to move, change and adjust objects. These commands are all found in the **Edit** menu.

One thing these commands all have in common is that when you select an object, the command applies to the entire object. There is a second set of commands which have to do with points of objects. These are listed in the **Points** menu.

UNDO command

Edit -> Undo

The UNDO command reverses the last editing or drawing command.

Procedure:

1. Click the Undo icon, select "Undo" from the **Edit** menu, or type <CTRL>+Z.
2. The last change you made will be undone. If you drew a new object, it will be erased. If you moved an object, it will be returned to its original position, and so on.

Some commands cannot be undone, including: SAVE, Close, SAVE AS, and Create Symbol. ZOOM and PAN

commands don't count--UNDO will undo whatever you did before the Zoom. In general, drawing, editing, grading and marker commands can be undone.

PatternMaker also supports a multiple-undo/redo feature. The number of commands you can undo or redo is determined by the configuration settings you have selected (see Configure Options). This number is limited only by the speed and memory capacity of your computer -- a longer Undo history will make your computer run more slowly.

If you undo the maximum number of steps, the command is inactive until you complete another undoable action.

See also:

REDO command

REDO command

Edit -> Redo

The REDO command restores the last editing or drawing action that was reversed with the UNDO command.

Procedure:

1. Click the Redo icon, or select "Redo" from the **Edit** menu.
2. The last action you undid will be redone.

See also:

UNDO command

MOVE command

Edit -> Move

The MOVE command moves one or more objects.

Procedure:

1. Click on the Move icon, or select "Move" from the **Edit** menu. The command name MOVE will appear in **green** on the right side of the status bar. The prompt on the command line says `Select object (selection done is RightMouse) :` .
2. Click **LM** on the object(s) to move. You can select and unselect as many objects as you want by repetitive clicking. The command line will keep you informed as objects are selected and unselected. If you want to move a whole pattern piece, be sure to select *all* of its pieces – i.e. darts in a bodice piece, grainline marks, etc.(all parts need to be highlighted)
3. If you are **done with selecting objects** click **RM** .
   If the Right mouse Context menu is set On you will get a menu to choose from. Select **Done Selecting**.
   The prompt on the command line says `Base point?`
   If you want to cancel the command select "Cancel Command" instead of Done Selecting.
4. The base point (the start of the move) is like grabbing a handle on the pieces to move. Simply click **LM** somewhere within the selected object(s). The command line will now ask for `Destination?`
5. Move the mouse around to move the piece(s), or enter a destination by typing a position in coordinate format. You will see a light blue line showing the origin and destination of the piece(s).

   Note: Do not "click and drag." Click once where you want to start moving the pieces; release the mouse button; and then click again where you want them to end up.
6. When the pieces reach the desired location, click **LM** to release them.

If you want to move pieces off the edge of the screen, use the ZOOM or PAN functions to see where you are going. You can use ZOOM and/or PAN even if you're in the middle of another command

If you want to cancel the command , click **RM**, or press <ESC> until the command name is ***purple*** and you can read on the command line : `Cancel Command`
If the Right mouse Context menu is set On (in Settings/Configure default) after clicking **RM**, or press <ESC> you will get a menu to choose from. Select **Cancel Command**.

.

See also :

COPY command

COPY command

Edit -> Copy

The COPY command copies one or more objects. COPY is just like MOVE, except that you get one copy of the selected objects in the original position, and one copy in the new position.

Procedure:

1. Click the Copy icon, or select "Copy" from the **Edit** menu. The command name COPY will appear in **green** on the right side of the status bar. The prompt on the command line says `Select object (selection done is RightMouse) :`.
2. Click **LM** on the object(s) to copy. You can select and unselect as many objects as you want by repetitive clicking. The command line will keep you informed as objects are selected and unselected. If you want to copy a whole pattern piece, be sure to select *all* of its pieces – i.e. darts in a bodice piece, grainline marks, etc.
3. If you are **done with selecting objects** click **RM** .
   If the Right mouse Context menu is set On you will get a menu to choose from. Select **Done Selecting**.
   The prompt on the command line says `Base point?`
   If you want to cancel the command select "Cancel Command" instead of Done Selecting.
4. The "base point" is like grabbing a handle on the pieces to move. Simply click **LM** somewhere within the selected object(s). The command line will now ask for `Destination?`
5. Move the mouse around to copy the piece(s), or enter a destination by typing a position in coordinate format .. You will see a light blue line showing the origin and destination of the piece(s).
6. When the pieces reach the desired location, click **LM** to release them.

If you want to cancel the command , click **RM**, or press <ESC> until the command name is purple and you can read on the command line : `Cancel Command`
If the Right mouse Context menu is set On (in Settings/Configure default) after clicking **RM**, or press <ESC> you will get a menu to choose from. Select **Cancel Command**.

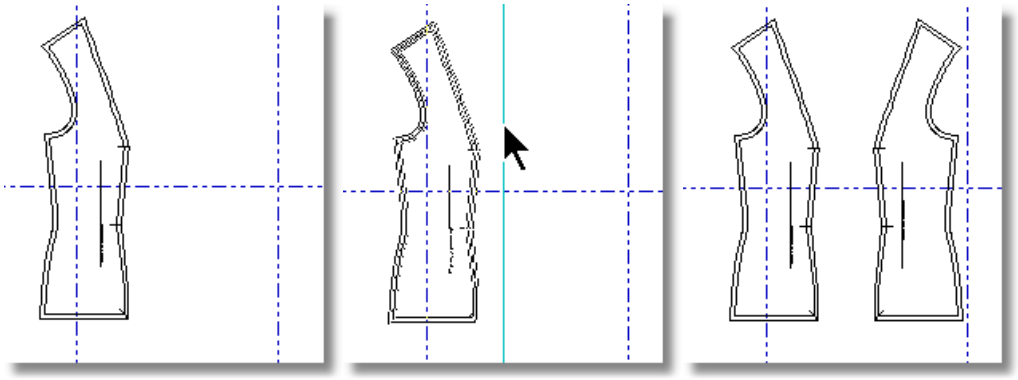
See also:

MOVE command

MIRROR command

Edit -> Mirror

The MIRROR command creates a mirror image copy of the selected object(s), leaving the original object in place.



Procedure:

1. Select "Mirror" from the **Edit** menu. The command name MIRROR will appear in **green** on the right side of the status bar. The prompt on the command line says `Select object (selection done is RightMouse):`
2. Click **LM** on the object(s) you want to mirror. You can select and unselect as many objects as you want by repetitive clicking. The command line will keep you informed as pieces are selected and unselected. If you want to mirror a whole pattern piece, be sure to select *all* of its pieces -- ie. darts in a bodice piece, grainline marks, etc.
3. If you are **done with selecting objects** click **RM** .
   If the Right mouse Context menu is set On you will get a menu to choose from. Select **Done Selecting**.
   The prompt on the command line says `Start of line to reflect across:`.
   To select the right point it is very helpful to turn on the Snap Endpoint first.
   If you want to cancel the command select "Cancel Command" instead of Done Selecting.
4. Click **LM** on the screen to indicate the beginning of the reflection line. The prompt on the command line says `Second point of reflection line:`
5. If you want a perfectly vertical mirror, just press <ENTER> here, and the command is over. Otherwise, move the mouse around, and watch the reflection line move accordingly. You can reflect at any angle. You can also type relative coordinates here.
6. When you have the line the way you want it, click **LM**. The object(s) will be mirrored across the line.

The MIRROR command can be important for completing the second half of a pattern. For instance, you can draft the right side of a blouse in great detail, then make the left side all at once with MIRROR.

> ***Example:*** *Suppose your blouse pattern has a single-piece front. Make a half front piece – one that goes from the Center Front line to the right side seam. Add darts, seam allowances, adjust the fit, etc. When it's all ready, select the* MIRROR *command. Select the main piece as well as the darts and other objects. When you are prompted for the mirror line, use* Snap To Endpoint *(<CTRL>+<F3>) to select the Center Front-Collar point and the Center Front-Waist point. Now you have two pieces that meet along the Center Front line. Use* JOIN *to join these pieces together, and you have your symmetrical front piece.*

If you want to cancel the command , click **RM**, or press <ESC> until the command name is purple and you can read on the command line : `Cancel Command`
If the Right mouse Context menu is set On (in Settings/Configure default) after clicking **RM**, or press <ESC> you

will get a menu to choose from. Select **Cancel Command**.

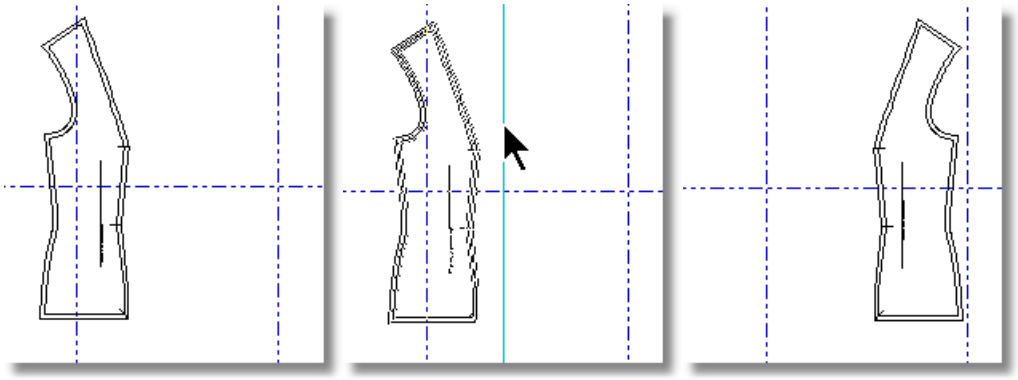
See also:

REFLECT command
FLIP HORIZ command
FLIP VERT command

REFLECT command

Edit -> Reflect

The REFLECT command reflects an object across a line that you draw. This line can be drawn at any angle.



Procedure:

1. Click the Reflect icon, or select "Reflect" from the **Edit** menu. The command name REFLECT will appear in **green** on the right side of the status bar. The prompt on the command line says `Select object (selection done is RightMouse):`
2. Click **LM** on the object(s) you want to reflect. You can select and unselect as many objects as you want by repetitive clicking. The command line will keep you informed as pieces are selected and unselected. If you want to reflect a whole pattern piece, be sure to select *all* of its pieces -- ie. darts in a bodice piece, grainline marks, etc.
3. If you are **done with selecting objects** click **RM** . If the Right mouse Context menu is set On you will get a menu to choose from. Select **Done Selecting**.
   The prompt on the command line says `Start of line to reflect across:.`
   To select the right point it is very helpful to turn on the Snap Endpoint first.
   If you want to cancel the command select "Cancel Command" instead of Done Selecting.
4. Click **LM** on the screen to indicate the beginning of the reflection line. The prompt on the command line says `Second point of reflection line:`
5. If you want a perfectly vertical reflection, just press <ENTER> here, and the command is over. Otherwise, move the mouse around, and watch the reflection line move accordingly. You can reflect at any angle. You can also type relative coordinates here.
6. When you have the line the way you want it, click **LM**. The object(s) will be reflected across the line.

If you want to cancel the command , click **RM**, or press <ESC> until the command name is purple and you can read on the command line : `Cancel Command`
If the Right mouse Context menu is set On (in Settings/Configure default) after clicking **RM**, or press <ESC> you will get a menu to choose from. Select **Cancel Command**.

See also:

MIRROR command
FLIP HORIZ command
FLIP VERT command

ROTATE command

Edit -> Rotate

The ROTATE command rotates one or more objects around a "center point".

Procedure:

1. Click the Rotate icon, or select "Rotate" from the **Edit** menu. The command name ROTATE will appear in **green** on the right side of the status bar. The prompt on the command line says `Select object (selection done is RightMouse):`
2. Click **LM** on the object(s) to rotate. You can select and unselect as many objects as you want by repetitive clicking. The command line will keep you informed as objects are selected and unselected. If you want to rotate a whole pattern piece, be sure to select *all* of its pieces – i.e. darts in a bodice piece, grainline in a sleeve, etc.
3. If you are **done with selecting objects** click **RM** . If the Right mouse Context menu is set On you will get a menu to choose from. Select **Done Selecting**.
   The prompt on the command line says `Rotate about what point?`
   To select the right point it is very helpful to turn on first the Snap Endpoint.
   If you want to cancel the command select "Cancel Command" instead of Done Selecting.
4. Click on the point you want the pieces to rotate around – like the center of a clock. The prompt on the command line says `Rotation (angle or base point of rotation):`
5. You can enter the rotation angle in one of three ways:
   - *Angle:* Type in the number of degrees you want to rotate the object(s). Your objects will rotate counterclockwise (left) that many degrees. To rotate the objects 90 degrees, type 90 and press <ENTER>. To go 90 degrees clockwise (right), type 270 and press <ENTER>. (There's no cursor on the command line, and you don't have to click there -- just type the numbers.) After you press <ENTER>, the pieces rotate, and you are done with the command.
   - *Base point and end point:* The base point is like a "handle" that you use to pick up the object(s). Click with **LM** somewhere to indicate the base point. Next, move the mouse around and watch the object(s) rotate around the center point. As you do this, you will see two **cyan** (bluish) lines which indicate the angle of rotation between the two points. When the object has rotated as much as you want, click **LM** to end the rotation and "drop" the objects(s).

     Hint: *Using* Snap To Endpoint *or* Snap To Grid *when you select the start and end points will allow you to rotate objects to align with each other, or with a horizontal or vertical line.*
   - *Base point and distance:* Click with **LM** somewhere to indicate the base point, then type a number and <Enter>. The number represents either inches or centimeters, depending on the Units you are working in. PatternMaker calculates a rotation angle such that the selected point moves the specified distance. This is for certain pattern layout procedures that require you to rotate an object for a measured distance.

You don't have to select the above choices from a list. Just start entering the information and PatternMaker will figure out which method you are using.

If you want to cancel the command , click **RM**, or press <ESC> until the command name is purple and you can read on the command line : `Cancel Command`

If the Right mouse Context menu is set On (in Settings/Configure default) after clicking **RM**, or press <ESC> you will get a menu to choose from. Select **Cancel Command**.

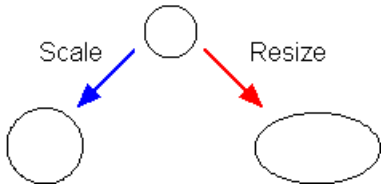
See also:

ROTATE VERTEX command

SCALE command

Edit -> Scale

The SCALE function makes objects proportionally larger or smaller, using one scaling factor for both X (horizontal) and Y (vertical) directions. Use this command to change the size of an object without changing its shape. All four types of PatternMaker objects can be changed with the SCALE command.



Procedure:

1. Select "Scale" from the **Edit** menu. The command name SCALE will appear in **green** on the right side of the status bar. The prompt on the command line says `Select object (selection done is RightMouse):`.
2. Click **LM** on the object(s) to scale. You can select and unselect as many objects as you want by repetitive clicking. The command line will keep you informed as objects are selected and unselected. If you want to scale a whole pattern piece, be sure to select *all* of its pieces – i.e. darts in a bodice piece, grainline marks, etc.
3. If you are **done with selecting objects** click **RM** .
   If the Right mouse Context menu is set On you will get a menu to choose from. Select **Done Selecting**.
   If you want to cancel the command select "Cancel Command" instead of Done Selecting.
4. The command line will now display the original dimensions of the object(s). A **cyan** (bluish) square is drawn to indicate the original area of the selected object(s). As you move the mouse, a green box indicates the new size.
5. Click **LM** when the green box is the size you want the objects, or use one of the following options. Select an option either by typing a letter, or with an icon:

Type letter:	Description:
C *= set center*	By default, the lower left corner of the cyan square is the center of expansion, i.e. it doesn't move. If you want to have a different center, type C. You will be prompted for a new center point. Input this point and then continue with the command.
P *= scale around corner*	This option sets the lower left corner as the center of expansion. It is the opposite of the C option. This is the default for the command.
F *= enter scaling factor*	You will be asked for the scaling factor. (For example, ".5" is half the size; "3" is three times the size.) Enter this in the dialog box and select "OK". This option will also be selected if you type in a single number.
X or Y *= size to measure*	These options calculate a scaling factor to give you a measurement you want. This will save you doing some math. You will be asked to select two points in the drawing. (To measure horizontally, select X; to measure vertically, select Y.) PatternMaker will tell you the current distance between these points, and ask you what you want the

distance to be. PatternMaker will then calculate a scaling factor to give you the distance you want.

Example: *Suppose you have used your digitizing tablet to copy a pattern from a book in 1/6 scale. Choose the SCALE command, select all objects, then type F and enter a scaling factor of 6. When you print the pattern, it will be life-sized.*

If you want to cancel the command , click **RM**, or press <ESC> until the command name is purple and you can read on the command line : `Cancel Command`
If the Right mouse Context menu is set On (in Settings/Configure default) after clicking **RM**, or press <ESC> you will get a menu to choose from. Select **Cancel Command**.

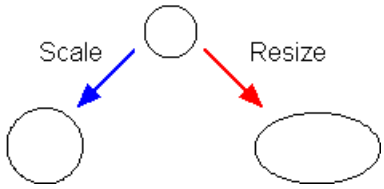
See also:

RESIZE command

RESIZE command

Edit -> Resize

The RESIZE command is used to change an object's shape *and* size. Different scaling factors are used for the X (horizontal) and Y (vertical) directions, so you can change the size and proportion of objects simultaneously. Only POLY and DIM objects can be changed with the RESIZE command.



Procedure:

1. Click the Resize icon, or select "Resize" from the **Edit** menu. The command name RESIZE will appear in **green** on the right side of the status bar. The prompt on the command line says `Select object (selection done is RightMouse):`
2. Click **LM** on the object(s) to resize. You can select and unselect as many objects as you want by repetitive clicking. The command line will keep you informed as objects are selected and unselected. If you want to resize a whole pattern piece, be sure to select *all* of its pieces -- ie. darts in a bodice piece, grainline marks, etc.
3. If you are **done with selecting objects** click **RM** .
   If the Right mouse Context menu is set On you will get a menu to choose from. Select **Done Selecting**.
   If you want to cancel the command select "Cancel Command" instead of Done Selecting.
4. The command line will now display the original dimensions of the object(s). A **cyan** (bluish) square is drawn to indicate the original area of the selected objects. As you move the mouse, a green box indicates the new shape and size. The objects will be resized by X and Y factors that make them fit the green box.
5. When the green box is the size and shape you want, you can click **LM** to resize the object(s). However, rather than using the mouse to resize "by eye," you will usually want to use one or more of the following options. Select an option either by typing a letter, or with an icon:

Type letter:	**Description:**
C = set center	By default, the lower left corner of the cyan square is the center of expansion, i.e. it doesn't move. If you want to have a different center, for example if you want the right side of an object to stay put while the left side moves, type C. You will be prompted for

	a new center point. Input this point and then continue with the command.
P = resize around corner	This option sets the lower left corner as the center of expansion. It is the opposite of the C option. This is the default for the command.
F = enter scaling factor	You will be asked for the scaling factors. (For example, ".5" is half the size; "3" is three times the size.) Enter them in the dialog box and click "OK." If one of the numbers is negative, the selected object(s) will be reversed. ***Example:*** *Suppose your material requires a shrinkage allowance of 3% in one direction and 6% in the other. Your pattern pieces need to be expanded by factors of 1.03 and 1.06, respectively. After selecting all objects in the drawing, type F. Type 1.03 and 1.06 into the dialog box and select "OK".*
X/Y = size to measure	These options calculate a scaling factor to give you a measurement you want. This will save you doing some math. If you select X, the objects will be resized in the X direction, but the Y scale will stay the same. If you select Y, the Y scale will change, and the X scale stays the same. You will be asked to select two points in the drawing. PatternMaker will tell you the current distance between these points, and ask you what you want the distance to be. PatternMaker will calculate a scaling factor to give you the distance you want. ***Example:*** *Suppose you have a blouse with a center front measurement of 14 inches and you want to change it to 15 inches. Select the blouse object and any associated objects such as darts, etc. Then type Y. The prompt will ask you for the first control point and then the second control point. Use Snap to End Point to select the points at the top and bottom of the center front line. A dialog box will then say,* `Original measurement is 14.000000` *Type in 15 and click "OK." Your blouse will be made taller but its width will stay the same.*

If you want to cancel the command , click **RM**, or press <ESC> until the command name is purple and you can read on the command line : `Cancel Command`
If the Right mouse Context menu is set On (in Settings/Configure default) after clicking **RM**, or press <ESC> you will get a menu to choose from. Select **Cancel Command**.

See also:

SCALE command

CHANGE OBJECT command

Edit -> Change object

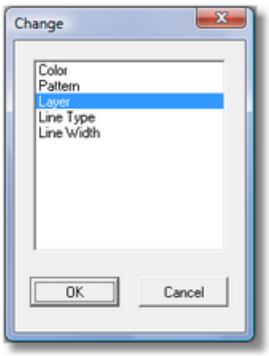
The CHANGE OBJECT command changes one of the basic properties (color, fill, layer, line type, line width) of one or more objects.

The CHANGE OBJECT command appears in the same submenu as the CHANGE FONT, CHANGE TEXT and CHANGE GROUPcommand.

Procedure:

1. Select "Change..." from the **Edit** menu, then select "Change Object" from the submenu. The command name CHANGE OBJECT will appear in **green** on the right side of the status bar. The prompt on the command line says `Select object(selection done is RightMouse):`.
2. Click **LM** on the object(s) you want to change. You can select and unselect as many objects as you want by repetitive clicking. The command line will keep you informed as objects are selected and unselected.

3. If you are **done with selecting objects** click **RM** .
   If the Right mouse Context menu is set On you will get a menu to choose from. Select **Done Selecting**.
   If you want to cancel the command select "Cancel Command" instead of Done Selecting.
   The "Change" dialog box appears.



4. Select which property you want to change (Color, Pattern, Layer, Line Type or Line Width) and click the "OK" button.
5. The next dialog box shows the choices for that property. Select a choice by clicking with the mouse, and then click the "OK" button. All of the selected objects will be changed to the new setting.

Note: Change Object does affect on objects. If objects are grouped together and you want to change the whole group then use Change Group.

If you want to cancel the command , click **RM**, or press <ESC> until the command name is purple and you can read on the command line : `Cancel Command`
If the Right mouse Context menu is set On (in Settings/Configure default) after clicking **RM**, or press <ESC> you will get a menu to choose from. Select **Cancel Command**.

See also:

CHANGE GROUP command
CHANGE FONT command
CHANGE TEXT command
Setting drawing preferences

CHANGE FONT command

Edit -> Change font

The CHANGE FONT command assigns a different font (typeface) to the selected text object(s) in your drawing.

The CHANGE FONT command appears in the same submenu as the CHANGE OBJECT, CHANGE TEXT and CHANGE GROUPcommand.

Procedure:

1. Select "Change..." from the **Edit** menu, then select "Change Font" from the submenu. The command name CHANGE FONT will appear in **green** on the right side of the status bar. The prompt on the command line says `Select object (selection done is RightMouse):`.
2. Click **LM** on the text object(s) you want to change. You can select and unselect as many objects as you want by repetitive clicking. The command line will keep you informed as objects are selected and unselected.
3. If you are **done with selecting objects** click **RM** .

If the Right mouse Context menu is set On you will get a menu to choose from. Select **Done Selecting**.
The "Change Font" dialog box opens.

4. Select a new font from the drop-down box, and then click the "OK" button. All of the selected text objects will be changed to the new font.

This is the only way to change the font of an existing text object in your drawing. You may find it easier to select a font from the drop-down box on the status bar before inserting the text object.

If you want to cancel the command , click **RM**, or press <ESC> until the command name is purple and you can read on the command line : `Cancel Command`
If the Right mouse Context menu is set On (in Settings/Configure default) after clicking **RM**, or press <ESC> you will get a menu to choose from. Select **Cancel Command**.

See also:

TEXT command

FONT command

CHANGE TEXT command

CHANGE TEXT command

Edit -> Change text

CHANGE TEXT allows you to change the size, rotation, or the content of the text itself in a text object.

The CHANGE TEXT command appears in the same submenu as the CHANGE FONT, CHANGE OBJECT and CHANGE GROUPcommand.

Procedure:

1. Select "Change" from the **Edit** menu, then select "Change Text" from the submenu. The command name CHANGE TEXT will appear in **green** on the right side of the status bar. The prompt on the command line says `Select object (selection done is RightMouse):`
2. Click **LM** on the text object you want to change. Only one text object can be selected at a time. If you click on a second text object, the first one is unselected.
3. If you are **done with selecting objects** click **RM** .
   If the Right mouse Context menu is set On you will get a menu to choose from. Select **Done Selecting**.
   The "Text Info" dialog box appears.
4. Enter a new size or rotation angle, or new words for the text itself. The size is the height of the letters in inches, not points. The angle is the number of degrees the text is rotated counterclockwise from a normal position. For example, an angle of 90 degrees will make the text read upwards.
5. When finished, click the "OK" button to return to the drawing screen.

If you want to cancel the command , click **RM**, or press <ESC> until the command name is purple and you can read on the command line : `Cancel Command`
If the Right mouse Context menu is set On (in Settings/Configure default) after clicking **RM**, or press <ESC> you will get a menu to choose from. Select **Cancel Command**.

See also:

CHANGE FONT command

CHANGE GROUP command

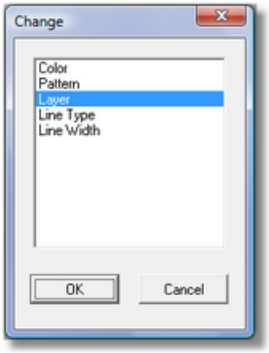
Edit -> Change group

The CHANGE GROUP command changes one of the basic properties (color, fill, layer, line type, line width) of all objects in a selected group.

The CHANGE GROUP command appears in the same submenu as the CHANGE FONT, CHANGE TEXT and CHANGE OBJECTcommand.

Procedure:

1. Select "Change..." from the **Edit** menu, then select "Change Group" from the submenu. The command name CHANGE GROUP will appear in **green** on the right side of the status bar. The prompt on the command line says `Select a Group (selection done is RightMouse):`.
2. Click **LM** on the group you want to change. Only one group can be selected at a time. If you click on a second group, the first one is unselected. The command line will keep you informed as groups are selected and unselected.
3. If you are **done with selecting groups** click **RM** .
   If the Right mouse Context menu is set On you will get a menu to choose from. Select **Done Selecting**.
   The "Change" dialog box appears.



4. Select which property you want to change (Color, Pattern, Layer, Line Type or Line Width) and click the "OK" button.
5. The next dialog box shows the choices for that property. Select a choice by clicking with the mouse, and then click the "OK" button. All of the objects in the selected group will be changed to the new setting.

If you want to cancel the command , click **RM**, or press <ESC> until the command name is purple and you can read on the command line : `Cancel Command`
If the Right mouse Context menu is set On (in Settings/Configure default) after clicking **RM**, or press <ESC> you will get a menu to choose from. Select **Cancel Command**.

See also:

CHANGE OBJECT command

Setting drawing preferences

ERASE command

Edit -> Erase

The ERASE command erases one or more objects.

Procedure:

1. Click on the Erase icon, or click "Erase" on the **Edit** menu. The command name ERASE will appear in **green** on the right side of the status bar. The prompt on the command line says `Select object (selection done is RightMouse):`
2. Click **LM** on the object(s) to erase. As you click on objects, they will be highlighted. If you select something by accident, just click on it again to un-highlight it. You can select and unselect as many objects as you want by repetitive clicking.
3. If you are **done with selecting objects** click **RM** . If the Right mouse Context menu is set On you will get a menu to choose from. Select **Done Selecting**.
   The object(s) you selected will be erased.

Note: If the Right mouse Context menu is set off:
Although you can abort many commands by pressing the <ESC> key, the ERASE command cannot be aborted.

If you press the <ESC> key while an object is highlighted, it will be erased. If you want to cancel the command, either un-select all objects and then press <ESC>, or go ahead and finish the command and then immediately use the UNDO command before doing anything else.

CLOSE OBJECT command

Edit -> Close Object

The CLOSE OBJECT command changes an open polygon object to a closed object. A closed object is an object whose ends meet, such as a square or circle. An open object is one whose ends don't meet, such as a letter "L". Only closed objects can have fill patterns.

Procedure:

1. Select "Close Object" from the **Edit** menu. The command name CLOSE OBJECT will appear in **green** on the right side of the status bar. The prompt on the command line says `Select object (selection done is RightMouse):`
2. Click **LM** on one polygon object. You can only select one object at a time, so if you click on a second, it replaces the first.
3. **When you have the correct object selected**, click **RM** .
   If the Right mouse Context menu is set On you will get a menu to choose from. Select **Done Selecting**.
4. PatternMaker will add one line segment to the selected object, making the object a closed polygon.

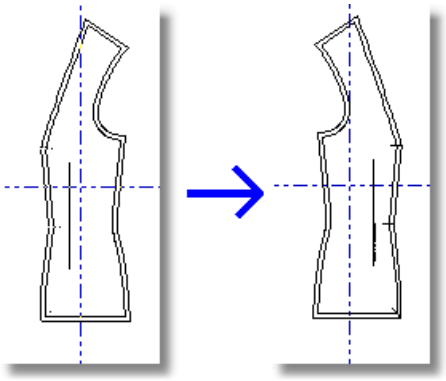
If you want to cancel the command , click **RM**, or press <ESC> until the command name is purple and you can read on the command line : `Cancel Command`
If the Right mouse Context menu is set On (in Settings/Configure default) after clicking **RM**, or press <ESC> you will get a menu to choose from. Select **Cancel Command**.

To make a closed object open, use the DELETE SEGMENT command.

FLIP HORIZ

Edit -> Flip Horiz

The FLIP HORIZONTAL command alters an object by "spinning" it within the outline of its current location. This command does not move or copy the object to a different part of the screen. The selected piece moves horizontally within its space (around a vertical axis).



Procedure:

1. Click the Flip Horizontal icon, or select "Flip Horiz" from the **Edit** menu. The command name FLIPHORZ will appear in **green** on the right side of the status bar. The prompt on the command line says `Select object (selection done is RightMouse) :`
2. Click **LM** on the object(s) you want to flip. You can select and unselect as many objects as you want by repetitive clicking. The command line will keep you informed as pieces are selected and unselected.
3. If you are **done with selecting objects** click **RM** .
   If the Right mouse Context menu is set On you will get a menu to choose from. Select **Done Selecting**.
   The piece(s) will be immediately flipped.

If you want to cancel the command , click **RM**, or press <ESC> until the command name is purple and you can read on the command line : `Cancel Command`
If the Right mouse Context menu is set On (in Settings/Configure default) after clicking **RM**, or press <ESC> you will get a menu to choose from. Select **Cancel Command**.

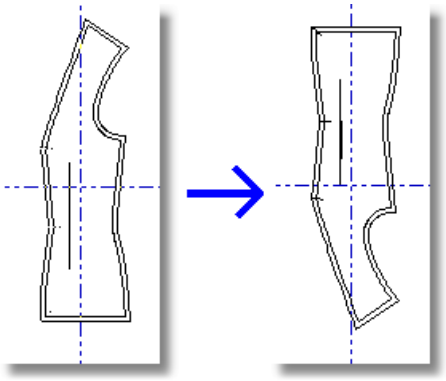
See also:

MIRROR command
REFLECT command
FLIP VERT command

FLIP VERT

Edit -> Flip Vert

The FLIP VERTICAL command alters an object by "spinning" it within the outline of its current location. This command does not move or copy the object to a different part of the screen. The selected piece moves vertically within its space (around a horizontal axis).



Procedure:

1. Click the Flip Vertical icon, or select "Flip Vert" from the **Edit** menu. The command name FLIPVERT will appear in **green** on the right side of the status bar. The prompt on the command line says `Select object (selection done is RightMouse) :`
2. Click **LM** on the object(s) you want to flip. You can select and unselect as many objects as you want by repetitive clicking. The command line will keep you informed as pieces are selected and unselected.
3. If you are **done with selecting objects** click **RM**.
   If the Right mouse Context menu is set On you will get a menu to choose from. Select **Done Selecting**.
   The piece(s) will be immediately flipped.

If you want to cancel the command , click **RM**, or press <ESC> until the command name is purple and you can read on the command line : `Cancel Command`
If the Right mouse Context menu is set On (in Settings/Configure default) after clicking **RM**, or press <ESC> you will get a menu to choose from. Select **Cancel Command**.

See also:

MIRROR command
REFLECT command
FLIP HORIZ command

CUT command

Edit -> Cut

The CUT command cuts one object along a line defined by a second object. The CUT command works with open or closed polygon objects. It does not work with text, dimension lines, or symbols.

Remember: This CUT command has nothing to do with the "cut and paste" features found in many Windows programs.

Procedure:

1. In order to use the CUT command, you must already have in your drawing the object you want to cut, and the object you will cut with (such as a line). You may need to move an existing object, or draw a completely new object. Do this first, before continuing with this command.

   Hint: Sometimes you will cut an object with a pre-existing object. More often, you will draw a new object to serve as the cutting line. Do the cut, then use ERASE *to get rid of the cutting line and the piece(s) you don't want.*

2. When you are ready to cut, click on the Cut icon, or select "Cut" from the **Edit** menu. The command name CUT will appear in **green** on the right side of the status bar. The prompt on the command line will say: `Select object to cut:`
3. Click **LM** on the object you want to cut. In the CUT function you can only select one object at a time, so if you click on a second object, it will replace the first as the object that is highlighted.
4. **When you have the correct object selected**, click **RM**.
   If the Right mouse Context menu is set On you will get a menu to choose from. Select **Done Selecting**.
   The prompt on the command line will say: `Select object to cut with:`
5. Click **LM** on the object that will form the cutting line. This is like a cookie cutter, or like the line the scissors follow when cutting the first object.
6. After you select the second object, click **RM**.
   If the Right mouse Context menu is set On you will get a menu to choose from. Select **Done Selecting**.
   The prompt on the command line will say `Done`.
   The first object will be cut by the second. Nothing will appear to have changed in the drawing, because the objects do not move. However, if you apply a command such as MOVE or ERASE on one of the pieces, you will notice the cut objects.

   If you're sure nothing happened, it may be because you selected objects that don't overlap. Use MOVE, MOVE VERTEX or ADD VERTEX to give your objects some overlap.

Note on CUT and JOIN: *Unlike many CAD programs, PatternMaker thinks of objects as shapes with an inside and an outside. Therefore, if you try to use* CUT *or* JOIN *on objects that overlap themselves, or cross over themselves, PatternMaker may be confused because it doesn't know which is inside and which is outside. If you get a strange result, use the* UNDO *command. Then use* ID POINT *to see where the vertices of your objects really are. You can fix them with the* MOVE VERTEX *command.*

If you cut apart an object containing grading arrows, PatternMaker may add arrows to the pieces so they will still grade the same.

If you want to cancel the command , click **RM**, or press <ESC> until the command name is purple and you can read on the command line : `Cancel Command`
If the Right mouse Context menu is set On (in Settings/Configure default) after clicking **RM**, or press <ESC> you will get a menu to choose from. Select **Cancel Command**.

See also:

QUICK CUT command

JOIN command

JOIN command

Edit -> Join

The JOIN commmand merges two overlapping polygon objects together into one object. With closed objects, this is like taping two pieces of paper together. With open objects, it joins them end-to-end. The combined object will have the color and fill style of the first chosen object.

The JOIN command is designed for use with polygon objects. It does not work with text or symbols.

Procedure:

1. Click the Join icon, or select "Join" from the **Edit** menu. The command name JOIN appears in **green** on the right side of the status bar, and the prompt on the command line says `Select first object to join:`
2. Click **LM** on one polygon object. Only one object can be selected at a time, so if you click on a second object, the first object will be unselected.
3. If you are **done with selecting objects**, click **RM**.
   If the Right mouse Context menu is set On you will get a menu to choose from. Select **Done Selecting**.
   The prompt `Select second object to join:` will now appear on the command line.
4. Select the second object that you wish to join to the first. It must overlap, or at least touch, the first object.
5. When you have selected the second object click **RM**.
   If the Right mouse Context menu is set On you will get a menu to choose from. Select **Done Selecting**.
   The two objects will be joined. The prompt on the command line will say `Done`.

***Note on* CUT *and* JOIN:** *Unlike many CAD programs, PatternMaker thinks of objects as shapes with an inside and an outside. Therefore, if you try to use* CUT *or* JOIN *on objects that overlap themselves, or cross over themselves, PatternMaker may be confused because it doesn't know which is inside and which is outside. If you get a strange result, use the* UNDO

If you want to cancel the command , click **RM**, or press <ESC> until the command name is purple and you can read on the command line : `Cancel Command`
If the Right mouse Context menu is set On (in Settings/Configure default) after clicking **RM**, or press <ESC> you will get a menu to choose from. Select **Cancel Command**.

See also:

CUT command

QUICK CUT command

Edit -> Quick cu

The QUICK CUT command draws a cut line and cuts an object in one step. You can cut either open or closed Polygon objects. With this command you can only cut with a single straight line.

Procedure:

1. Select "Quick Cut" from the **Edit** menu. The command name QUICK CUT will appear in **green** on the right side of the status bar. The prompt on the command line says `Select object (selection done is RightMouse) :`
2. Click **LM** on the object to be cut. You can only select one object at a time, so if you click on a second, it replaces the first.
3. **When you have the correct object selected**, click **RM** .
   If the Right mouse Context menu is set On you will get a menu to choose from. Select **Done Selecting**.

The prompt on the command line says `Enter a point, <ESC> to cancel:`

4. Click **LM** at the location where the cut will begin. The mouse cursor behaves as in Snap To Nearest mode -- you can only select a location on a line segment. You can combine this with another Snap mode to help you put the cut line in the right place, such as Snap to Midpoint, Snap to Endpoint, or Snap to Measured Distance. After you click, the prompt on the command line says `Second point, <ESC> to cancel:`
5. Click **LM** at the location where the cut will end. After you click, the object is automatically cut.

If you want to cancel the command , click **RM**, or press <ESC> until the command name is purple and you can read on the command line : `Cancel Command`
If the Right mouse Context menu is set On (in Settings/Configure default) after clicking **RM**, or press <ESC> you will get a menu to choose from. Select **Cancel Command**.

See also:
CUT command
JOIN command

6.4 Point Menu Commands

The **Points** menu contains editing commands that are used to move or modify points (vertices). These are different than the commands in the **Edit** menu because they apply only to vertices – you can change some of the vertices of an object and leave the rest unchanged.

Commands in the Points menu apply mostly to points in Polygon objects, but some, such as MOVE VERTEX, can be used on points in any object type.

ADD VERTEX command

Point -> Add Vertex

The ADD VERTEX command adds another vertex (point) to any polygon object. It does not work with text, dimensions or symbol insertions.

Procedure:

1. Select "Add Vertex" from the **Point** menu. The command name ADD VERTEX will appear in **green** on the right side of the status bar. The prompt on the command line says `Select object to add vertex to:`
2. Click **LM** on one segment of an object. The selected segment will turn red. If you click on the wrong segment, just click again on the correct one.
3. **When you have selected the segment you want**, click **RM** .
   If the Right mouse Context menu is set On you will get a menu to choose from. Select **Done Selecting**.
   The prompt on the command line says `Location for new vertex:`

4. Click on the segment with **LM** to show the position for the new point**.**

> ***Tip:*** *Try using various snap modes to help in placing the new point. Use* Snap To Nearest *or* Snap To Measured Distance *if you want the new point to lie on an existing line or arc of the object; use* Snap To Midpoint *to place a point exactly halfway between two others.*

If you want to cancel the command , click **RM**, or press <ESC> until the command name is purple and you can read on the command line : `Cancel Command`
If the Right mouse Context menu is set On (in Settings/Configure default) after clicking **RM**, or press <ESC> you will get a menu to choose from. Select **Cancel command**.

See also:

DIVIDE SEGMENT command
DELETE VERTEX command
MOVE VERTEX command
CORNER VERTEX command
ROUND VERTEX command

ADD MEASURED VERTEX command

Point -> Add Measured Vertex

The ADD MEASURED VERTEX command adds another vertex (point) to segment with a defined distance. It does not work with text, dimensions or symbol insertions.

Procedure:

1. Select "Add Measured Vertex" from the **Point** menu. The command name ADD MEASURED VERTEX will appear in **green** on the right side of the status bar. The prompt on the command line says `Select segment to add vertex to:`
2. Click **LM** on one segment of an object. The selected segment will turn red. If you click on the wrong segment, just click again on the correct one.
3. When you have selected the segment you want (**you are done selecting**), click **RM** .
   If the Right mouse Context menu is set On you will get a menu to choose from. Select **Done Selecting**.
   The Snap to Measured Distance box will appear. You can fill in the desired distance.
   Click OK.
4. The prompt on the command line says `Select new vertex:`
   By moving the mouse cursor over the segment two new points will appear on both sides of the segment.
   Click at the right point with **LM** to add the right point to the segment.

If you want to cancel the command , click **RM**, or press <ESC> until the command name is purple and you can read on the command line : `Cancel Command`
If the Right mouse Context menu is set On (in Settings/Configure default) after clicking **RM**, or press <ESC> you will get a menu to choose from. Select **Cancel command**.

See also

DELETE VERTEX command
MOVE VERTEX command
CORNER VERTEX command
ROUND VERTEX command

DELETE VERTEX command

Point -> Delete Vertex

The DELETE VERTEX command removes vertices (points) from an object(s). If the object has only one vertex, the object will be deleted.

Procedure:

1. Select "Delete Vertex" from the **Point** menu. The command name DELETE VERTEX will appear in **green** on the right side of the status bar. The prompt on the command line says `Select point (selection done is RightMouse) :`
2. Click **LM** on the point(s) you want to delete. You can select and unselect as many points as you want by

repetitive clicking. They don't all have to be on the same object. Points will turn red as they are selected. If you accidentally click on the wrong point, just click on it again to unselect it.

3. If you are **done with selecting points** click **RM** .
   If the Right mouse Context menu is set On you will get a menu to choose from. Select **Done Selecting**.
   The selected point(s) will be deleted.

If you want to cancel the command , click **RM**, or press <ESC> until the command name is purple and you can read on the command line : `Cancel Command`
If the Right mouse Context menu is set On (in Settings/Configure default) after clicking **RM**, or press <ESC> you will get a menu to choose from. Select **Cancel command**.

See also:

ADD VERTEX command

MOVE VERTEX command

Point -> Move Vertex

The MOVE VERTEX command moves one or more points of your objects.

Procedure:

1. Select "Move Vertex" from the **Point** menu. The prompt on the command line says `Select point(s) (selection done is RightMouse) :`
2. Click **LM** on the point(s) you want to move. Points will turn red as they are selected. If you accidentally click on the wrong point, just click on it again to unselect it.
3. If you are **done with selecting points** click **RM** .
   If the Right mouse Context menu is set On you will get a menu to choose from. Select **Done Selecting**.
   The prompt on the command line will say `Base point?`
4. The base point is like the "handle" you will use to pick up and move the points. Click **LM** somewhere near the selected point(s) to indicate the base point. The prompt changes to `Destination:`
5. As you move the mouse around, you will see the selected points moving, also. Click **LM** to "drop" the point (s) at the destination, or click **RM** to cancel the command.

> ***Tip:*** *You can use coordinates to move the points with more accuracy than you can achieve with the mouse. See Using Coordinates for more details.*

If you want to cancel the command , click **RM**, or press <ESC> until the command name is purple and you can read on the command line : `Cancel Command`
If the Right mouse Context menu is set On (in Settings/Configure default) after clicking **RM**, or press <ESC> you will get a menu to choose from. Select Cancel command.

See also:

ADD VERTEX command
DELETE VERTEX command
CORNER VERTEX command
ROUND VERTEX command

ROTATE VERTEX command

Point -> Rotate Vertex

The ROTATE VERTEX command rotates one or more points around a "center point". You can use ROTATE VERTEX to rotate some of the points in an object while leaving the rest where they are. This is especially useful for rotating darts.

Procedure:

1. Select "Rotate Vertex from the **Point** menu.
2. The prompt on the command line says `Select point(s) (selection done is RightMouse) :`
   Click **LM** on the point(s) you want to rotate. Points will turn red as they are selected. If you accidentally click on the wrong point, just click on it again to unselect it.
3. If you are **done with selecting points** click **RM** .
   If the Right mouse Context menu is set On you will get a menu to choose from. Select **Done Selecting**.
   The prompt on the command line says `Rotate about what point?`
4. Click **LM** on a spot that will be the center of the rotation (try using a Snap mode here, like Snap to Endpoint).
   The prompt on the command line will say `Rotation (angle or base of rotation):`
5. You can enter the rotation angle in one of three ways:
   - *Angle:* Type in the number of degrees you want to rotate the object(s). The selected points will rotate counterclockwise (left) that many degrees. To rotate the points 90 degrees, type 90 and press <ENTER>. To go 90 degrees clockwise (right), type 270 and press <ENTER>. (There's no cursor on the command line, and you don't have to click there – just type the numbers.) After you press <ENTER>, the points rotate, and you are done with the command.
   - *Base point and end point:* Click to enter two points. The angle of rotation is the angle between the two points. Two **cyan (bluish)** lines appear to indicate the angle. After you click on the base point, you can watch the selected points move as you move the mouse around. Click **LM** to place the points in the new position and complete the command.
   - *Base point and distance:* Enter a point, then type in a number. PatternMaker calculates a rotation angle such that the selected point moves the specified distance. After you type the number and press <ENTER>, the points rotate, and you are done with the command.

   You don't have to select the above choices from a list. Just start entering the information and PatternMaker will figure out which method you are using.

   Use the Snap Endpoint for an exact rotation point.

If you want to cancel the command , click **RM**, or press <ESC> until the command name is purple and you can read on the command line : `Cancel Command`
If the Right mouse Context menu is set On (in Settings/Configure default) after clicking **RM**, or press <ESC> you will get a menu to choose from. Select Cancel command.

See also:

ROTATE command

DELETE SEGMENT command

Point -> Delete Segment

The DELETE SEGMENT command will remove a line or arc segment from a polygon object. If it is a closed polygon, this will make it an open polygon. If it is already open, this will remove a segment from one end, or break it into two objects.

Procedure:

1. Select "Delete Segment" from the **Point** menu. The prompt on the command line will say `Select segment to delete:`
2. Click **LM** on a segment to remove. With this command you can only select one segment at a time, so if you click on a second segment, it replaces the first.
3. **When you have selected the correct segment**, click **RM**.
   If the Right mouse Context menu is set On you will get a menu to choose from. Select **Done Selecting**.
   The selected segment will be removed.

If you want to cancel the command , click **RM**, or press <ESC> and select from the Right mouse Context menu **Cancel command**.

See also:

CLOSE OBJECT command

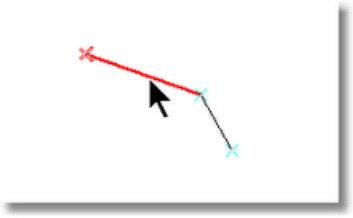
DIVIDE SEGMENT command

Point -> Divide Segment

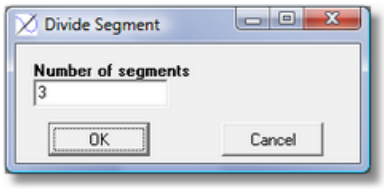
Use DIVIDE SEGMENT to add evenly-spaced vertices to one segment of an object. This command will only work on straight-line segments, not curved segments.

Procedure:

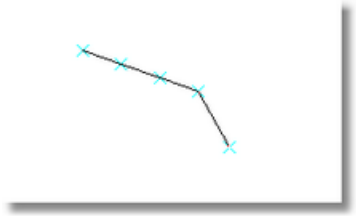
1. Click on the Divide Segment icon, or select "Divide Segment" from the **Point** menu. The command name DIVIDE SEGMENT will appear in **green** on the right side of the status bar. The prompt on the command line says `Segment to divide:`
2. Click **LM** on the segment you want to divide. The segment turns red when it is selected. You can only select one segment at a time, so if you select a second segment, the first is unselected.



3. **When you have selected the correct segment**, click **RM**.
   If the Right mouse Context menu is set On you will get a menu to choose from. Select **Done Selecting**.
   A dialog box opens, asking how many parts you want to create.



4. Enter a number and click the "OK" button. New vertices are added to the selected segment.



If you want to cancel the command , click **RM**, or press <ESC> until the command name is purple and you can read on the command line : `Cancel Command`
If the Right mouse Context menu is set On (in Settings/Configure default) after clicking **RM**, or press <ESC> you will get a menu to choose from. Select Cancel command.

See also:

ADD VERTEX command

CORNER VERTEX command

Point -> Corner Vertex

The CORNER VERTEX command converts an arc control point of a polygon object to an ordinary (line) point. This changes the curved segment to two line segments joined by a common corner.

Procedure:

1. Select "Corner Vertex" from the **Point** menu. The prompt on the command line says `Select arc corner point to straighten:`
2. Use <F5> SHOW VERTEX to turn on the points. The arc control points appear in **blue/cyan**.
3. Click **LM** on an arc control point. The point will turn red when it is selected.
4. If you are **done with selecting points** click **RM** .
   If the Right mouse Context menu is set On you will get a menu to choose from. Select **Done Selecting**.
   The point(s) you selected will be converted from a curve to a corner.

If you want to cancel the command , click **RM**, or press <ESC> until the command name is purple and you can read on the command line : `Cancel Command`
If the Right mouse Context menu is set On (in Settings/Configure default) after clicking **RM**, or press <ESC> you will get a menu to choose from. Select Cancel command.

The CORNER VERTEX command may be reversed with the ROUND VERTEX command.

ROUND VERTEX command

Point -> Round Vertex

The ROUND VERTEX command converts a Line vertex of a polygon object to an arc corner point. This changes the corner to a curve. ROUND VERTEX will not convert a vertex if the resulting object would be illegal. For instance, an object can't have two adjacent arc control points.

If you want to convert a single straight line segment into a curve, add a point first. You need three points to form a curve.

Procedure:

1. Select "Round Vertex" from the **Point** menu. The prompt on the command line says `Select corner to convert to curve:`
2. Use <F5> SHOW VERTEX to turn on the points. The corner points appear in **blue**.
3. Click **LM** on a corner point. The point will turn red when it is selected.
4. If you are **done with selecting points** click **RM** .
   If the Right mouse Context menu is set On you will get a menu to choose from. Select **Done Selecting**.
   The corner point(s) you selected will be converted to arc control (**round**) points.

The ROUND VERTEX command may be reversed with the CORNER VERTEX command, which converts individual corner points back to Line points.

If you want to cancel the command , click **RM**, or press <ESC> until the command name is purple and you can read on the command line : `Cancel Command`
If the Right mouse Context menu is set On (in Settings/Configure default) after clicking **RM**, or press <ESC> you will get a menu to choose from. Select Cancel command.

See also:

ADD VERTEX command

ALIGN-X command

Point -> Align-X

The ALIGN-X command sets the X coordinates of two or more points to the same value. This puts the points on a single vertical line. Use this to line up points, or to tidy up vertical lines.
ALIGN-X works with all types of points, including text, insertion, and dimension objects.

Procedure:

1. Click on the Align-X icon, or select "Align-X" from the **Point** menu. The prompt on the command line says `Align on vertical line with what point?`
2. Click **LM** on one point that the others will be aligned with. The point turns red as it is selected. You can only select one point at a time, so if you click on a second, it replaces the first.
3. When you have the correct point selected click **RM**.
   If the Right mouse Context menu is set On you will get a menu to choose from. Select **Done Selecting**.
   The prompt on the command line says `Select points to align:`
4. Click **LM** on one or more additional points. You can select as many points as you want by repetitive clicking.
5. If you are **done with selecting points** click **RM** .
   If the Right mouse Context menu is set On you will get a menu to choose from. Select **Done Selecting**.

The selected points will be aligned on a vertical line with the first point.

If you want to cancel the command , click **RM**, or press <ESC> until the command name is purple and you can read on the command line : `Cancel Command`
If the Right mouse Context menu is set On (in Settings/Configure default) after clicking **RM**, or press <ESC> you will get a menu to choose from. Select Cancel command.

See also:

ALIGN-Y command

MOVE VERTEX command

ALIGN-Y command

Point -> Align-Y

The ALIGN-Y command sets the Y coordinates of two or more points to the same value. This puts the points on a single horizontal line. Use this to line up points, or to tidy up horizontal lines. ALIGN-Y works with all types of points, including text, insertion, and dimension objects.

Procedure:

1. Click on the Align-Y icon, or select "Align-Y" from the **Point** menu. The prompt on the command line says `Align on horizontal line with what point?`
2. Click **LM** on one point that the others will be aligned with. The point turns red as it is selected. You can only select one point at a time, so if you click on a second, it replaces the first.
3. When you have the correct point selected click **RM**.
   If the Right mouse Context menu is set On you will get a menu to choose from. Select **Done Selecting**.
   The prompt on the command line says `Select points to align:`
4. Click **LM** on one or more additional points. You can select as many points as you want by repetitive clicking.
5. If you are **done with selecting points** click **RM** . I
   f the Right mouse Context menu is set On you will get a menu to choose from. Select **Done Selecting**.
   The selected points will be aligned on a horizontal line with the first point.

If you want to cancel the command , click **RM**, or press <ESC> until the command name is purple and you can read on the command line : `Cancel Command`
If the Right mouse Context menu is set On (in Settings/Configure default) after clicking **RM**, or press <ESC> you will get a menu to choose from. Select Cancel command.

See also:

ALIGN-X command

MOVE VERTEX command

SET/MEASURE DISTANCE command

Point -> Set/Measure Distance

The SET/MEASURE DISTANCE command measures and adjusts the length of a section of a polygon object. Use this command to check the lengths of armscyes and other curves.

Procedure:

1. Select "Set/Measure Distance" from the **Point** menu. The prompt on the command line says `Select start of segment:`
2. Click **LM** on a point at one end of the segment you wish to measure. The point will turn red as it is selected. If you make a mistake, just click on a second point, and the first one will be unselected.
3. **When you have selected the point you want**, click **RM** .
   If the Right mouse Context menu is set On you will get a menu to choose from. Select **Done Selecting**.
   The prompt on the command line says `Select end of segment:`
4. Click **LM** on a point at the other end of the segment you are measuring. The point will turn red as it is selected. If you make a mistake, just click on a second point, and the first one will be unselected.
5. **When you have selected the point you want**, click **RM** .
   If the Right mouse Context menu is set On you will get a menu to choose from. Select **Done Selecting**.
   PatternMaker will highlight the object between the two points and ask you to verify that it is the correct segment. (The program needs to know whether to go clockwise or counter-clockwise.)
6. If it is the correct segment, click the "Yes" button. If not, click "No" and PatternMaker will highlight the object between the two points in the opposite direction. It will then repeat the verification message.
7. A dialog box appears, showing the current length of the selected section.
   If you want to change this length, type in a new number. PatternMaker will move the points that lie along the section to set the length to the value entered. The end points of the section will not be moved.

Notice that since the end points are not moved, the object or line segment must have at least three points. Therefore, you cannot use this command to change the length of a single line (which has only two points).

Do not use this command to make large changes (more than about ½ inch). Instead, use a command such as MOVE VERTEX to make larger changes, then use MEAS DIST to make fine adjustments.

SET/MEASURE DISTANCE is used for measuring along a curve.
To measure between two points in a straight line, use DIM.

If you want to cancel the command , click **RM**, or press <ESC> until the command name is purple and you can read on the command line : `Cancel Command`
If the Right mouse Context menu is set On (in Settings/Configure default) after clicking **RM**, or press <ESC> you will get a menu to choose from. Select Cancel command.

NOTCH command

Point -> Notch

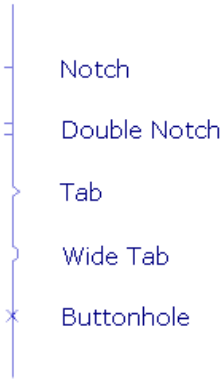
The NOTCH command *converts an existing vertex* of an object to a notch mark. Notch marks are used to align pattern pieces when sewing them together, etc. A notch point visually looks different on the screen, but is handled like any other vertex of an object. Notice that the term "notch" covers several different notches, tabs, and buttonholes.

> ***Tip:*** *If you want to place a notch where your object does not already have a vertex, use ADD VERTEX to place one there before using this command.*

Procedure:

1. Select "Notch" from the **Point** menu.
2. The prompt on the command line says `Select point (selection done is RightMouse) :` Click **LM** on the point you want to convert to a notch. You can select as many points as you want by repetitive clicking. If you make a mistake, click on the point again to unselect it.
3. If you are **done with selecting points** click **RM** or press the <ESC> key. If the Right mouse Context menu is set On you will get a menu to choose from. Select **Done Selecting**.
   A dialog box appears, offering you a list of notch types:

- Notch
- Double Notch
- Tab
- Wide Tab
- Buttonhole



4. Select the notch type you want, and click the "OK" button. All the points you selected will be converted to this type of notch.

The BUTTONHOLE command type lets you draw a whole row of buttonholes as a single object. This makes them much easier to grade and work with.

> ***Tip:*** *If the notch or tab is drawn facing the wrong direction, use NOTCH DIR to reverse it.*

If you want to cancel the command, click **RM**, or press <ESC> until the command name is purple and you can read on the command line : `Cancel Command`
If the Right mouse Context menu is set On (in Settings/Configure default) after clicking **RM**, or press <ESC> you will get a menu to choose from. Select Cancel command.

See also:

ADD VERTEX command
NOTCH DIR command

NOTCH DIR command

Point -> Notch Direction

The NOTCH DIRECTION command reverses the direction of the selected notch points. Normally, PatternMaker draws notches pointing to the inside of an object, and tabs on the outside. If the computer becomes confused and draws them backwards, or if you just prefer to have them drawn the other way, use this command to reverse them.

Procedure:

1. Select "Notch Direction" from the **Point** menu. The prompt on the command line says `Select point`

`(selection done is RightMouse) :`

2. Click **LM** on the notch(es) you want to reverse. You can select and unselect as many notches as you want by repetitive clicking.
3. If you are **done with selecting points** click **RM** or press the <ESC> key. If the Right mouse Context menu is set On you will get a menu to choose from. Select **Done Selecting**.
   The selected notches will be reversed.

If you want to cancel the command , click **RM**, or press <ESC> until the command name is purple and you can read on the command line : `Cancel Command`
If the Right mouse Context menu is set On (in Settings/Configure default) after clicking **RM**, or press <ESC> you will get a menu to choose from. Select Cancel command.

See also:

NOTCH command

6.5 View Menu Commands

The **View** menu contains all the commands that have to do with what you see in your drawing, and how you see things.

Many elements of the PatternMaker environment can be turned off and on as needed. These elements are described below.

The particular menu items you see will depend on which version of PatternMaker you are using. Not all commands are available in all versions.

TOGGLE PAGE GRID command

View -> Page Grid

This command shows or hides the page layout grid.

Procedure:

- Select "Page Grid" from the **View** menu. A check mark appears in front of the menu item if the page grid is turned on.
- You can also use the shortcut key <F12> for this command.

The size of this grid is determined by the size of the paper you are using in your printer. Inkjet printers and laser printers are not able to print all the way to the edge of the paper, so this grid displays just the printable area of the page, not the actual paper size. A change of printer or a different paper size will affect the appearance of the page grid.

This is also important when you print as PDF!! (the page grid changes)

Note: This icon is not shown on the icon bar by default, but you can turn it on if you wish. See Customizing the icon bar for details.

See also:

Page layout grid
PRINT command

TOGGLE GRID command

View -> Alignment Grid

This command turns the alignment grid on and off.

Procedure:

- Select "Grid" from the **View** menu. A check mark appears in front of the menu item if the grid is turned on.
- You can also use the shortcut key <F4> for this command.
- To change the grid spacing, use the GRID command on the Settings menu.

Note: This icon is not shown on the icon bar by default, but you can turn it on if you wish. See Customizing the icon bar for details.

See also:

Screen objects: Alignment grid

SNAP TO GRID

TOGGLE YARDAGE GRID command

View -> Yardage Grid

This command shows or hides the yardage grid.

Procedure:

- Select "Yardage Grid" from the **View** menu. A check mark appears in front of the menu item if the page grid is turned on.
- You can also use the shortcut key <CTRL>+<F12> for this command.

The size of this grid is determined by the "Bolt Width" setting on the Configure form. Each red-outlined panel represents one "width" of fabric (whatever you have designated that to be).

Note: This icon is not shown on the icon bar by default, but you can turn it on if you wish. See Customizing the icon bar for details.

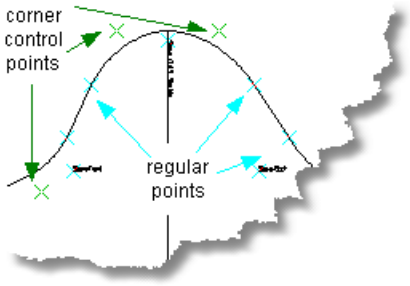
See also:

Arrange pattern layout

Define fabric width

POINTS - SHOW VERTEX command

This command shows or hides all the vertices (points) in the drawing. Points are represented by an "X." Corner points are shown in **green**, and regular straight-line points are shown in **blue/cyan**.



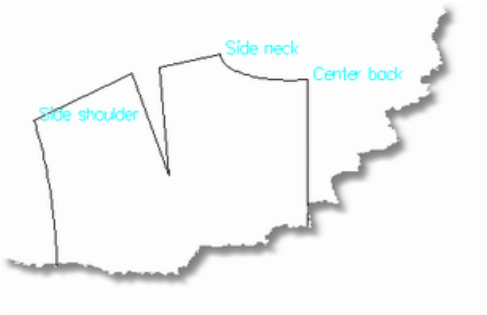
If there are two points at the same location the Xs cancel each other out, and no "X" appears at that location.

Procedure:

- Select "Points" from the **View** menu. A submenu opens. A check mark appears in front of the menu item "Show Vertex" if the points are turned on.
- You can also use the shortcut key <F5> for this command.

POINTS - SHOW NAME command

This command shows or hides the point names in the drawing.
Named points are used in the grading process, and also in some of the integrated editing operations with MacroGenerator.



Procedure:

- Select "Points" from the **View** menu. A submenu opens. A check mark appears in front of the menu item "Show Name" if the point names are turned on. If you turn on the names and nothing appears, it means that no points have been named.

Note: The size of the text for point names is determined by the DIM settings.

See also:

NAME POINT command

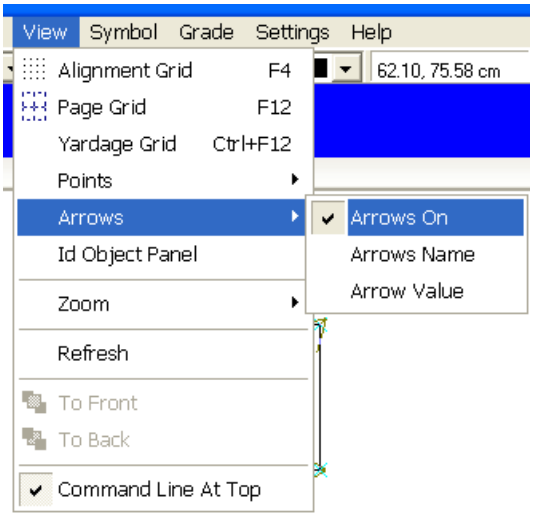
ARROWS ON command

View -> Arrows->Arrows On

ARROWS ON shows or hides the grading arrows. You can also use the shortcut key <F7> for this command.

Procedure:

- Select "Arrows" from the **View** menu. A submenu opens. A check mark appears in front of the menu item "Arrows On" if the arrows are turned on.
- You can also use the shortcut key <F7> for this command.



It is also possible to turn of/off the Arrow Names or Values. See the links down .

See also:

ARROWS VALUE
ARROWS NAME
ADD ARROW command
GRADE command

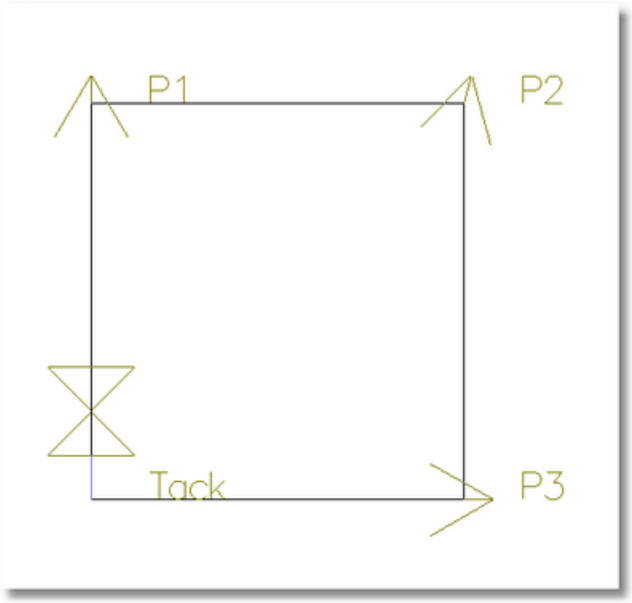
ARROWS NAME command

View -> Arrows->Arrows Name

ARROWS NAME shows or hides the names of the grading arrows.

Procedure:

- Select "Arrows" from the **View** menu. A submenu opens. A check mark appears in front of the menu item "Arrows Names" if the arrows names are turned on.



See also:

ARROWS ON command
ARROWS VALUE command
ADD ARROW command
GRADE command

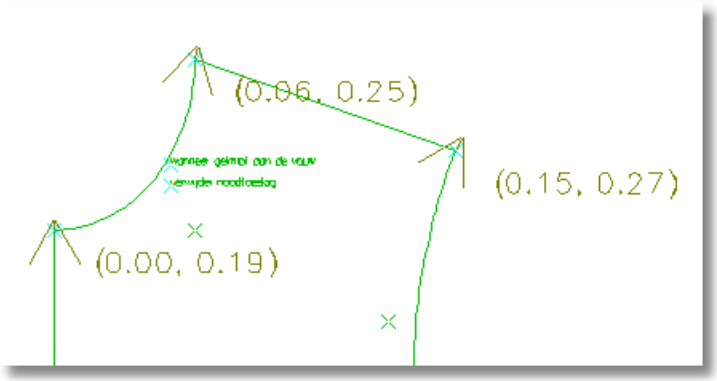
ARROWS VALUE command

View -> Arrows->Arrows Value

ARROW VALUE shows or hides the values of the grading arrows.

Procedure:

- Select "Arrows" from the **View** menu. A submenu opens. A check mark appears in front of the menu item "Arrow Value" if the arrow values are turned on.



See also:

ARROWS ON command

ARROWS NAME command
ADD ARROW command
GRADE command

ID OBJECT PANEL

The ID OBJECT PANEL is a function to help you identify objects and points in your drawings. It provides essential information about the selected vertex (point), Poly object, or Text object. This can be very useful in a complictated drawing where not all of this information is obvious.

Identifying Objects:

1. Select "ID Object Panel" from the **View** menu. Click on the *Object* tab.
2. Hover over an object with the mouse. The following information is displayed in the panel:
   - **Name** of object, if one has been assigned with the NAME OBJECT command
   - **Color** of object
   - The **Layer** the object is on
   - **Group** the object belongs to, if any
   - **Fill pattern** of the object
   - **Line Type** of the object
   - **Line Width** of the object
   - **Number** of object . Counts how many objects are in the drawing. Objects are numbered in the order in which they were drawn.

   Note: The properties of the object are displayed, but cannot be changed in this panel. Use CHANGE OBJECT to modify the color, fill, layer, etc.

Identifying Points:

1. Select "ID Object Panel" from the **View** menu. Click on the *Point* tab.
2. Hover over a point with the mouse. The following information is displayed in the panel:
   - **Point Name** The name of the point, if one has been defined with the NAME POINT command
   - **Type of object** (polygon, text, dimension, or symbol insertion)
   - **Point Type**:

   Arc Start = Start of a curve
   Arc Corner = Corner control point of a curve
   Open = Last point of an open polygon
   Closed = All other points (segment-to-segment, Text, Dim, etc.)
   - **X coordinates** The horizontal position of the point
   - **Y coordinates** The vertical position of the point
   - **Number in object** For example, "Point 4 of 5" means the 4th point of an object with 5 points.

Identifying Text Objects:

1. Select "ID Object Panel" from the **View** menu. Click on the *Text* tab.
2. Hover over a text object with the mouse. The following information is displayed in the panel:
   - **Font** The typeface used for the object
   - **Text** The content -- what the text says
   - **Size** Height of the letters, measured in the Units you have selected -- either inches or cm
   - **Angle** Rotation angle of the text object, measured from a horizontal line

Note: The properties of the text object are displayed, but cannot be changed in this panel. Use CHANGE TEXT to modify the content, size, or angle of the text object, and use CHANGE FONT to change the typeface

See also:

Show/hide ID Object Panel

TOGGLE MARKER AREA command

TOGGLE MARKER AREA shows or hides the marker area from view.

Procedure:

- Select "Marker Area" from the **View** menu. A check mark appears in front of the menu item if the Marker Area is turned on.
- To change the marker area settings, use SET MARKER AREA

TOGGLE PLAID command

TOGGLE PLAID POINTS shows or hides the plaid points for your marker pieces.

Procedure:

- Select "Plaid Points" from the **View** menu. A check mark appears in front of the menu item if the Plaid Points are turned on.

See also:

SET MARKER AREA command
ADD PLAID POINT command
ERASE PLAID POINT command
ACTIVE PLAID command
ARRANGE command
PLAID ARRANGE command

ZOOM commands

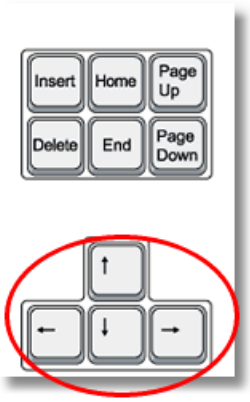
PAN commands

View -> Pan

PAN changes your point of view in a drawing, moving the center of the drawing to a new point without changing the scale. You can use either the icons or the arrow keys to pan up/down/left/right.

The arrow keys work just like the arrows on a window scroll bar:

- the up arrow scrolls up in the drawing, the drawing is going down
- the down arrow scrolls down in the drawing, the drawing is going up
- the right arrow scrolls to the right in the drawing, the drawing is going left
- the left arrow scrolls to the left in the drawing, the drawing is going right



You can use the <F9> key to pan so that the mouse location is at the center of the screen. With a digitizer

(Grading and Marker Studio only), this works even if the digitizer cursor is off the screen.

All of the pan keys and icons can be used at any time, even if you are in the middle of another command.

See also:

ZOOM command

ZOOM commands

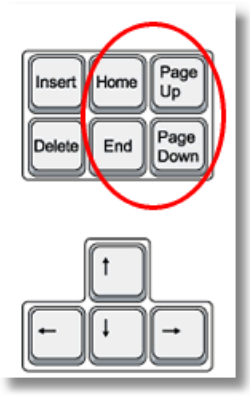
View -> Zoom

The ZOOM commands change the scale of your drawing on screen. PatternMaker lets you view your drawing at virtually any scale, and ZOOM has many options to select the scale you want.

Using the ZOOM commands will not change the actual size of your drawing, which is the size it prints out on paper.

Quick Zoom:

- To see the entire drawing, press the <END> key.
- To zoom to a specific point, put the mouse cursor on the point you want to see and press the <HOME> key or the <F3> key.
- To zoom in quickly, press the <Page Down> key or the <F2> key.
- To zoom out, press <Page Up> key or the <F1>.



Zoom menu commands:

Procedure

Activate the ZOOM command by clicking the Zoom icon, or select "Zoom" from the **View** menu. Then, follow any of the following options:

scale:
Type **F**. You will be prompted for a number and the scale will be set to that value. The larger the number, the larger objects will appear on your screen:

- 3 makes all objects appear three times larger than before
- .25 makes all objects appear 1/4 their previous size

window:

Click theWindow icon or of type **W**. This option draws a rectangle. Click on a point at one corner of the area you want to view (ie. upper left). Next, click on the opposite corner of the area you want to view (ie. lower right). The scale will be set so that this window fills the screen. This is the default option.

all:

Click the icon All or type **A**. The scale will be set so that all objects in the drawing are in view. (Objects on layers that are turned off are not considered). This has the same effect as pressing the <END> key.

previous:
Type **P**. Resets the scale to its last value.

The ZOOM options can be selected with icons or hot keys. All the icons and hot keys can be used at any time, even when you are in the middle of another command.

These Hot Key assignments can be changed on the *Hot Keys* tab of the "Configure" form, found on the **Settings** menu.

See also:

ZOOM IN/OUT command
ZOOM ALL command
PAN command
Configure options

ZOOM IN/OUT commands

ZOOM IN
Zoom in by a factor of two. This means all objects are shown twice as big as before.

ZOOM OUT
Zoom out by a factor of two. This means the drawing area contains twice as big an area as before.

See also:

ZOOM command
ZOOM ALL command
PAN command

ZOOM ALL command

View -> Zoom

ZOOM ALL zooms in or out so all objects in the current drawing are visible.

Procedure:

- Select ZOOM ALL from the **View**/Zoom menu, or press the <END> key.
- The scale will be changed and the picture redrawn so that all objects in the drawing can be seen.

Note: Any objects on layers that are turned "off" will be invisible, and they will be ignored in calculating the extent of the drawing.

See also:

ZOOM command
ZOOM IN/OUT command
PAN command

REFRESH command

The REFRESH command redraws the entire PatternMaker screen area. Occasionally Windows leaves stray marks in the PatternMaker window. Use this function to clear these up.

Procedure:

- Select "Refresh" from the **View** menu.
- The screen refreshes
-

TO FRONT command

View -> To Front

The TO FRONT command moves one or more objects to the front of the drawing. This is used when you need to select a vertex that is "under" or "behind" another object.

Procedure:

1. Select "To Front" from the **View** menu.
2. Click **LM** on one or more objects. You can select and unselect as many objects as you want by repetitive clicking.
3. If you are **done with selecting objects** click **RM** .
   If the Right mouse Context menu is set On you will get a menu to choose from. Select **Done Selecting**.
   The object(s) you selected will be moved to the front of the drawing.

See also:

TO BACK command

TO BACK command

View -> To Back

The TO BACK command moves one or more objects to the back of the drawing. This is used when you need to select a vertex that is "under" or "behind" another object.

Procedure:

1. Select "To Back" from the **View** menu.
2. Click **LM** on one or more objects. You can select and unselect as many objects as you want by repetitive clicking.
3. If you are **done with selecting objects** click **RM** or press the <ESC> key. If the Right mouse Context menu is set On you will get a menu to choose from. Select **Done Selecting**. The object(s) you selected will be moved to the back of the drawing.

See also:

TO FRONT command

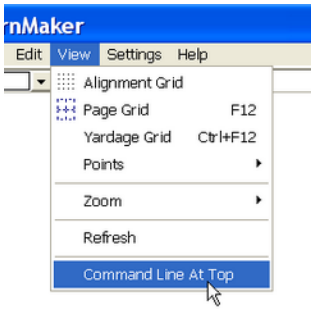
COMMANDLINE AT TOP command

View -> Commandline at top

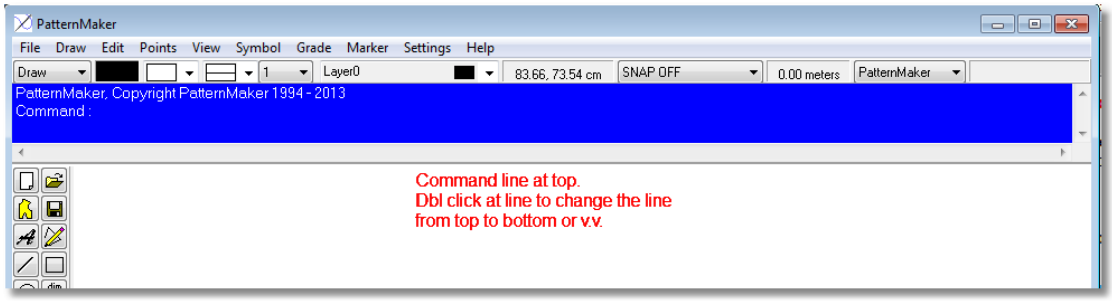
By default the command line (prompt) is set to the bottom of the screen. This position can be changed to the to of the screen with the Commandline at top command.
Moving the command line to the top will make the lines better readable.

Procedure:

1. Select "Commandline at top" from the **View** menu.
2. Click the checkbox before the Command line at top. The command line will be moved to the top of the screen just under the Status bar.



An easier way to move the command line is by **doubleclicking** at the Command line**.**
This will also move the line to the opposite place at the screen (top or bottom).



6.6 Symbol Menu Commands

The **Symbol** menu contains all the commands that have to do with creating and using Symbols, as well as commands that have to do with grouping and identifying objects in your drawing.

CREATE SYMBOL command

Symbol -> Create Symbol

The CREATE SYMBOL command defines a symbol in your drawing. Every symbol has a name and an associated image. Once you have defined a symbol, use INSERT to insert copies into your drawing.

Procedure:

1. Draw what you want the symbol to look like, using the various drawing commands.
2. Select "Create Symbol" from the **Symbol** menu. On the prompt line you will see the question `Name of new symbol?` and the symbol name box will appear.
3. On the left are the names of existing symbols. If you choose one of these, that existing symbol will be replaced with the symbol you have just drawn. If you type a new name in the space on the right, that will be the name of the new symbol. When you have entered a name, click the "OK" button.
4. Click **LM** on all the objects that you want to include in the symbol.
5. If you are **done with selecting objects** click **RM** .
   If the Right mouse Context menu is set On you will get a menu to choose from. Select **Done Selecting**.
   The prompt on the command line says `Insertion point?`
6. The insertion point is the point that will be used to locate the symbol when you insert it into your drawing. This can be anywhere, but make it someplace logical, such as the center of the group, or a corner of one of the objects. Click **LM** to indicate the insertion point.

(Note that when you click to indicate this point, nothing will appear different in the drawing.)

7. The symbol is now created, and is available to add to your drawing with the INSERT SYMBOL command.
8. Save the file with the symbol in it with a name that you can recognize as a library file. The best place to save that library file is: C:/Program files (x86)/Patternmaker software/Shared/Patterns/Library. When you have to select a library this folder opens automatically

To change what a symbol looks like, open the .pat file where you made the symbol, simply create the symbol again with the same name and save the file again. All insertions of the symbol will be updated automatically.

When you save a **.PAT** file containing a symbol, the file automatically becomes a library. The symbol can be one of many objects in the drawing, or you can save a file containing nothing but symbols.
We advise you to make separate library files with all the symbols in it. Then save or copy your library files to C:/ Program files (x86)/Patternmaker software/Shared/Patterns\Library. When you have to select a library this folder opens automatically and it is easier to find the desired library file.

It is possible to save the **.PAT** file with the symbol in the regular folder in My documents where **.PAT** files are saved. But when you have to select a library you have to browse for the right folder to find the library file. Saving it already in the Program files will save time.

See also:

SELECT LIBRARY command
INSERT SYMBOL command
PURGE command
EXPLODE command
Using Symbols & Libraries: Create a symbol

INSERT SYMBOL command

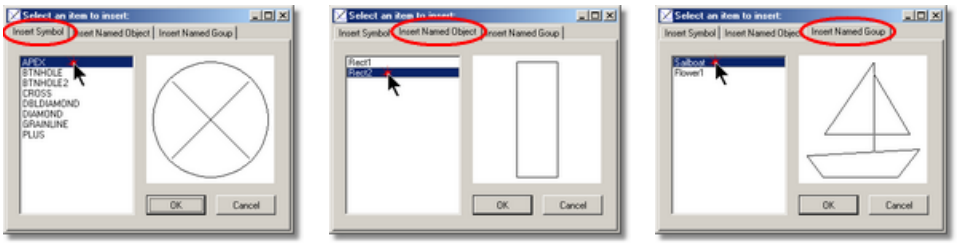
Symbol -> Insert

The INSERT SYMBOL command is used to put copies of a named object, group or symbol into your drawing from a library file.

Before you can use this command to insert a symbol, you must have a library of symbols defined (see CREATE SYMBOL).When you use the INSERT SYMBOL command to insert named objects or groups into another drawing, first you have to name objects or groups in a .pat file.(see NAME GROUP command or NAME OBJECT command) Select first as Library the .pat file with the named objects or groups or the library containing the symbols (see SELECT LIBRARY command).

Procedure:

1. Select "Insert" from the **Symbol** menu. (If the command is greyed out, it means you have not selected a library file.)
2. The "Insert" dialog box opens. This box has three tabs: *Insert Symbol*, *Insert Named Object*, and *Insert Named Group*.
3. When you click one of these tabs, you'll see a list of the available items, along with a preview when one is selected.



If there are no items of a particular type, that tab will be blank.

4. Select the item you want to insert, and click the "OK" button to return to the drawing screen.
5. As you move the mouse around, you will see the item "attached" to the mouse cursor.
6. **When you have the item in the position you want**, click **LM** to insert it. You can also specify the location by typing a position in coordinate format.

If you inserted a symbol, you can repeat the insertion by simply clicking **LM** again. If you inserted an object or group, clicking again will open the "Insert" form again.

Symbols can be split with the EXPLODE command.

See also:

PURGE command

SELECT LIBRARY command

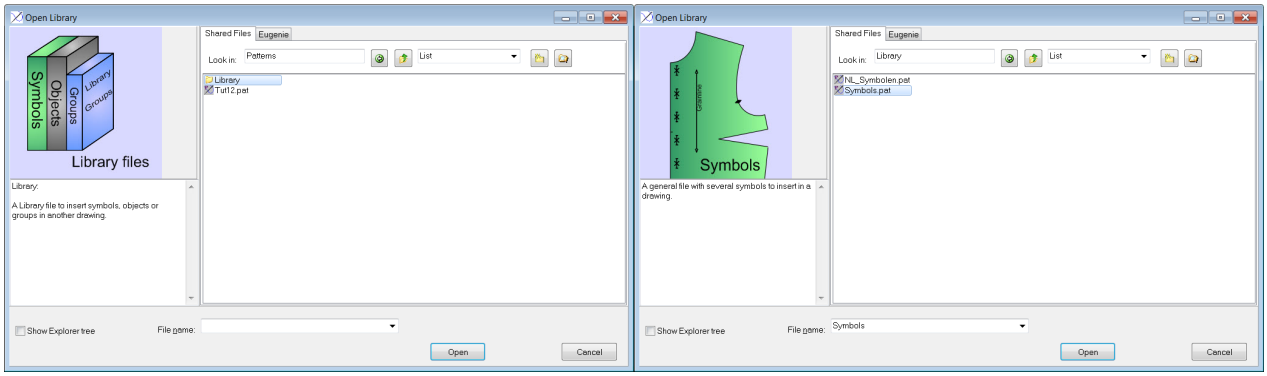
Symbol -> Select Library

The SELECT LIBRARY command activates a library file. Once you have selected a library, you can use the INSERT SYMBOL command to load symbols, groups or objects from it. Groups and objects need to be named. When an object or group is not named, it will not appear in the list.

PatternMaker designates one file at a time as the current library. If you open another library, the first one is closed.

Procedure:

1. Choose "Select Library" from the **Symbol** menu.
2. The Open File dialog box appears. As default the folder Patterns in Shared files will open, save the library. pat file in the sub folder Library to have easy access to it.
   Open the Library folder. Select a file to use as the library. Any PatternMaker drawing file (**.PAT** format) can be used as a library, as long as it contains at least one named object, group, or symbol.



3. Select a file and click the "Open" button. The selected library will be loaded.

See also:

CREATE SYMBOL command
NAME GROUP command
NAME OBJECT command

PURGE SYMBOL command

Symbol -> Purge

The PURGE command eliminates any unused symbols from your drawing. A symbol may be unused if you have defined it (CREATE SYMBOL) but have not actually inserted it into the current drawing. Remember, the objects you use to create the symbol are not themselves converted to a symbol. They remain individual objects, and the symbol goes into memory until you save the drawing.

If you have defined a symbol but use PURGE before the file has been saved, the symbol will be lost.

Procedure:

- Select "Purge" from the **Symbol** menu.
- The program will go through the list of symbols stored in the current drawing, and eliminate any that don't have an insertion somewhere in the drawing.
- *No symbols are deleted from a library file.* They are only removed from the computer's temporary memory.

See also:

CREATE SYMBOL command
SELECT LIBRARY command
INSERT SYMBOL command

EXPLODE command

Symbol -> Explode

The EXPLODE command takes an object and breaks it into its component parts.

This should not be confused with the UNGROUP command, which separates objects from each other while keeping them intact.

This command can be used on either Polygon or Symbol insertion objects; it has no effect on text or dimension objects.

Procedure:

1. Click the Explode icon, or select "Explode" from the **Symbol** menu.
2. Click **LM** on the object(s) you want to explode. You can select and unselect as many objects as you want by repetitive clicking.
3. If you are **done with selecting objects** click **RM** .
   If the Right mouse Context menu is set On you will get a menu to choose from. Select **Done Selecting**.
   The selected objects will be exploded.
   - A polygon will be split into line or arc segments. (You can rejoin them with the JOIN command.)
   - An instance of a symbol will be replaced by the symbol's component objects.

See also:

JOIN command

INSERT SYMBOL command

GROUP command

Symbol -> Group

This command groups the selected objects together. Groups of objects are always selected together. Whenever a command asks you to select some objects, you can select the entire group by clicking the mouse on any object in the group. If you want to make sure several objects stay together when you move them, group them together.

Procedure:

1. Click the Group icon, or select "Group" from the **Symbol** menu.
2. Click **LM** on the objects you want to group. You can select and unselect as many objects as you want by repetitive clicking.
3. If you are **done with selecting objects** click **RM**.
   If the Right mouse Context menu is set On you will get a menu to choose from. Select **Done Selecting**.
   The group is created.

Note: You must give the group a name with the NAME GROUP command if you plan to load it later with the INSERT (group) command.

See also:

UNGROUP command

INSERT SYMBOL command

UNGROUP command

Symbol -> Ungroup

This command breaks up a group into either its subgroups or individual objects.

Procedure:

1. Click the Ungroup icon, or select "Ungroup" from the **Symbol** menu.
2. Click **LM** on the group that you want to break apart. You can only select one group at a time. If you select a second group, the first one is unselected.
3. If you are **done with selecting the correct group** click **RM** .
   If the Right mouse Context menu is set On you will get a menu to choose from. Select **Done Selecting**.
   The group will be broken up into either its subgroups or individual objects.

See also:

GROUP command

EXPLODE command

NAME GROUP command

NAME GROUP assigns a name to the selected group. You have to give a name to a group before you can insert it from a library file.

Procedure:

1. Select "Name Group" from the **Symbol** menu.
2. Click **LM** on the group you want to name. You can only select one group at a time.
3. **When you have the correct group selected**, click **RM**.
   If the Right mouse Context menu is set On you will get a menu to choose from. Select **Done Selecting**.
   A dialog box appears, asking for the name of the group.
4. Type a name for the group, then click the "OK" button.

See also:

NAME OBJECT command

INSERT SYMBOL command

NAME OBJECT command

NAME OBJECT assigns a name to the selected object. You have to give a name to an object before you can insert it from a library file.

Procedure:

1. Select "Name Object" from the **Symbol** menu.
2. Click **LM** on the object(s) you want to name. You can select as many objects as you want by repetitive clicking.
3. If you are **done with selecting objects** click **RM**.
   If the Right mouse Context menu is set On you will get a menu to choose from. Select **Done Selecting**.
   A dialog box appears, asking for the name of the object(s).
4. Type a name, then click the "OK" button. All selected objects will be given the same name.

The name of an object is displayed when you use the ID OBJECT PANEL.

See also:

NAME GROUP command
INSERT SYMBOL command

NAME POINT command

NAME POINT assigns a name to the selected point.

Procedure:

1. Select "Name Point" from the **Symbol** menu.
2. Click **LM** on the point you want to name. You can only select one point at a time.
3. **When you have the correct point selected**, click **RM** or press the <ESC> key. If the Right mouse Context menu is set On you will get a menu to choose from. Select **Done Selecting**. A dialog box appears, asking for the name of the point.
4. Type a name for the point and then click the "OK" button.

The name of the point is displayed when you use the ID OBJECT PANEL.

6.7 Settings Menu Commands

The **Settings** menu contains commands that control all aspects of how the program looks and behaves, as well as users' measurement table information.

SNAP commands

The SNAP command sets the snap mode. When Snap is on, an "X" will follow the mouse and show the nearest snap point.
Turn on for instance the Snap Endpoint and turn on also the points with < F5> key and move with your mouse over your drawing. You will see that a blue vertex will change from blue to red when you move the mouse over a vertex.

Snap is used in combination with LINE, POLY, MOVE and other drawing and editing commands. Whenever you click the mouse and there is a snap point near it, that point is selected instead of the actual mouse location. This lets you make more precise inputs.

Procedure:

- You can set the snap mode at any time with the Function (hot) keys or icons, even when you're in the middle of a command.
- If you select the "Snap" command from the **Settings** menu, you are presented with the following choices:

Option	What it does	Hot Key (hold <CTRL> key down)
snap off	Turn off Snap	<CTRL>+<F1>
grid	Snap to grid points	<CTRL>+<F2>

end-point	Snap to endpoints/vertices	<CTRL>+<F3>
nearest	Snap to nearest edge of object	<CTRL>+<F4>
ortho	Draw vertical or horizontal only	<CTRL>+<F5>
mid-point	Snap to midpoints of lines	<CTRL>+<F6>
intersection	Snap to intersection of lines	<CTRL>+<F7>
offset	Snap to offset from line	<CTRL>+<F8>
measured distance	Measure along an object from a point	<CTRL>+<F9>

The Snap mode you choose stays in effect until you make a different selection.

See also:

Hot key functions

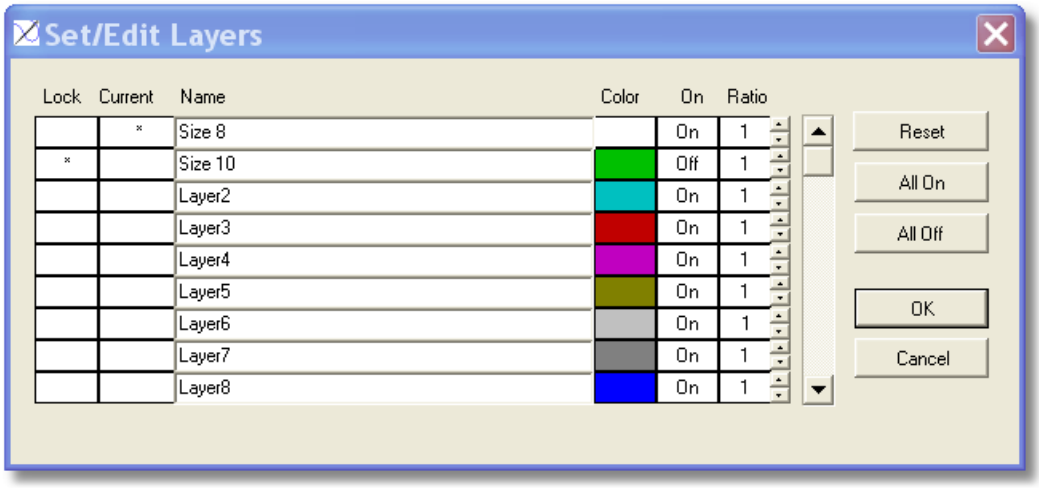
LAYER command

Settings -> Layers

The LAYER command is used to modify the layer list. Every object is on a layer, and only objects on layers that are turned ON can be seen. A drawing can have up to 24 layers.

Procedure:

1. Activate the LAYER command by using the Hotkey <F11>, or select "Layer" from the **Settings** menu. A window appears listing information for all layers.
2. The window contains the following information:



Lock: Indicated with an asterisk. Objects on a locked layer remain visible, but cannot be selected or changed. Click the mouse to lock the layer.

Current : Indicated with an asterisk. All new objects are drawn on the current layer. Click the mouse by a different layer to switch to that layer.

Name: Click on the name, then type in a new name for the layer. By default, layers are named "Layer0," "Layer1," etc.

When you stretch the form the Name field becomes wider. It is therefore possible to read longer layer names.

Color: Click on the color swatch, then select a new default color for the layer. These settings apply only to the current drawing.

On: Click on the word "on" or "off" to turn layers on and off. Turning a layer off makes any object on that layer invisible.

Ratio: (Marker Studio only) Type a number in the appropriate box, or use **LM** to increase the number, and **RM** to decrease it. (See CUT RATIO)

Reset: Set all layers back to their original colors and names.

3. Click on any item with the mouse to change or set it. When finished, click the "OK" button.
4. After the dialog box closes, the drawing will be updated to reflect the new settings.

When you stretch the Set/Edit Layers form the Name field becomes wider. very handy for longer layer names.

You can also switch to a different layer by clicking the "Layer" drop-down box in the status bar

Note: you can change the width of the several fields in the status bar by moving your cursor over the side lines of a box. When you see the divider move it to the right or left, just the way you want it. It is possible to see the whole layer name by redesigning your status bar.

See also:

Using Layers
CHANGE OBJECT command
COLOR command

Digitizer

DRAW ALIGN command

DRAW ALIGN sets the origin and scaling factor of your digitizer tablet visually. Use this command if you don't know the numeric value of the scaling factor. (Compare with CONFIGURE DIGITIZER)

Procedure:

1. Select "Digitizer" from the **Settings** menu, then select "Draw Align" from the submenu.
2. Use your digitizer puck or pen to enter the beginning and ending points of a horizontal or vertical line on your digitizer.
3. Use the mouse (or typed coordinates) to enter the beginning and ending points of a line on the screen. Your two lines should either be both horizontal or both vertical.
4. The digitizer origin and the digitizer scaling factor are adjusted so that the two points on the digitizer correspond to the two points in the drawing.

Example:

Suppose you have a scale drawing in which 1 inch equals twelve inches. Using DRAW ALIGN, click the digitizer mouse on two points one inch apart. Then enter the coordinates (0,0) and (12,0) in the drawing. The scale is now set so that when you trace from the paper, the results in PatternMaker are life size.

See also:

Working With a Digitizer

SET ORIGIN command

TOGGLE DIGITIZER command

This command toggles the digitizer mode between absolute mode and mouse mode. In mouse mode, the digitizer works like a mouse. In absolute mode, the cursor is a plus (+) sign instead of an arrow and its position is the actual location of your digitizer device on the digitizer (your tablet is smaller than the drawing).

When using the digitizer to trace drawings, always use absolute mode. When selecting commands or icons, use mouse mode. When you are tracing an object and you have only a mouse with 4 buttons, you will need to switch back and forth between modes quite often to select point options for the POLY command.

Procedure:

Switch from mouse mode to absolute mode in one of the following ways:

1. Press the <F8> key.
2. Select "Digitizer" from the **Settings** menu, then select "Toggle Mode" from the submenu.
3. (If you are in mouse mode): click on the Toggle Mode field at the left end of the Status Bar.

In addition, if you are in absolute mode (plus cursor) and if you have not changed the digitizer button assignments, you can click Button 1 on the digitizer mouse to switch modes.

See also:

Working With a Digitizer

SET ORIGIN command

SET ORIGIN changes the origin of the digitizer tablet. Use this command when you start digitizing to set the base point of your digitizer mouse on your screen.You can also use this when you are digitizing something that is too big to digitize all at once.

The default location for the lower left corner of the digitizer is at (0,0) on your screen. If you change it, the digitizer area will correspond to a different area of the drawing.

Procedure:

1. Select in the menu **Settings**/Digitizer the Set Origin command. The command name SET ORIGIN will appear in **green** on the right side of the status bar. The prompt on the command line says `Select point on screen:`
2. Enter a point with **LM** on the screen where you want to start your drawing in PatternMaker, it will be somewhere in the left down corner of your screen.
   The prompt on the command line says `Select matching point on digitizer:`
3. Enter with the digitizer mouse the point by clicking the button for **LM** on the digitizer tablet. This will be when starting to digitize mostly the left down corner of your tablet.
4. You can tell when you are finished with the command when the command name SET ORIGIN on the status bar returns to ***purple***.

You have set now the base points on your screen and digitizer where the drawing starts.

If your paper drawing is bigger than your tablet you can set the origin again.
The first part of the digitizing you do as explained above. You digitize the pattern as much as you can. Then move

the paper drawing on your tablet to digitize the second part of the drawing. You use SET ORIGIN to make the digitizer's location correspond with the new position of the paper on the digitizer again.
The point on the screen with you computer mouse will be at a different place as before (this will be at the place the two parts of the drawing join).
The matching point on the digitizer will be also the place at the paper drawing where the two parts of the drawing join.

See also:

Working With a Digitizer

CONFIGURE DIGITIZER command

CONFIGURE DIGITIZER command

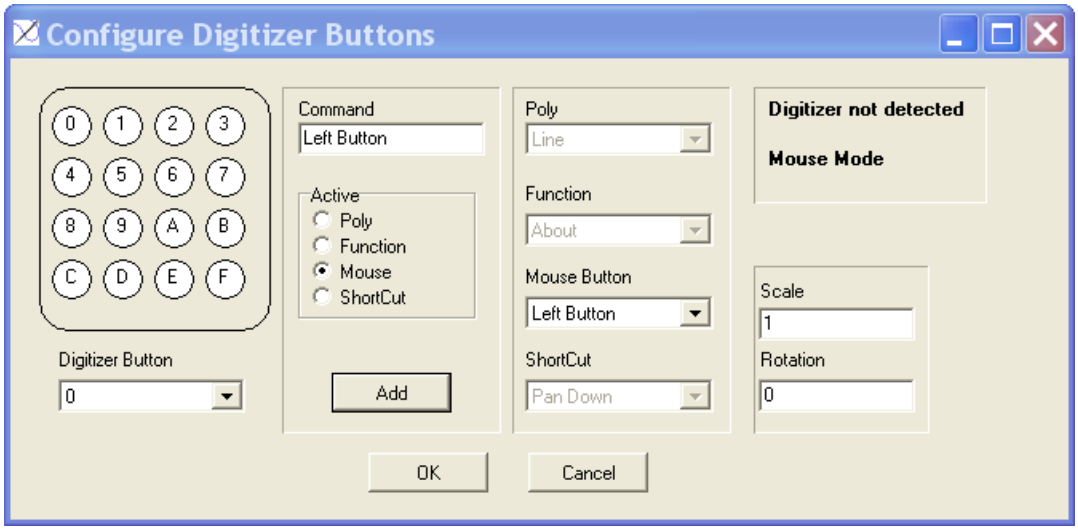
CONFIGURE DIGITIZER lets you specify certain settings related to how your digitizer operates.

Assigning Commands to Buttons

This feature lets you assign any PatternMaker command or keyboard shortcut to a button on your digitizer.

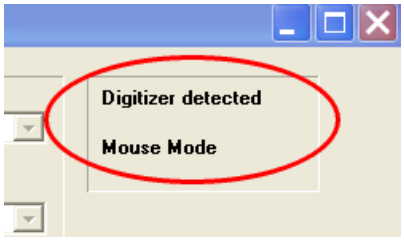
Procedure:

1. Select "Digitizer" from the **Settings** menu, then select "Configure" from the submenu. The "Configure Digitizer Buttons" dialog box opens.



When your digitizer is not yet connected to the computer you will get the message at the right side of the form "**Digitizer not detected**".

If the digitizer is recognized you will see the following:



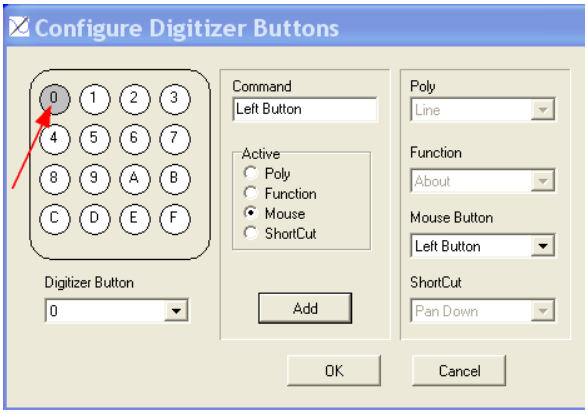
2. Begin with the fields on the left side called "Digitizer Button".
You can click on a button in the 16 button mouse example. The example is looking like a real 16 buttons digitizer mouse.
Or you can select the button you want to configure from the drop-down list .
After you select a button, the field called "Command" shows what command is assigned, if any.

3. To assign a new function, select the type of function in the "Active" group. Depending on which type you select, one of the drop-down lists to the right will be enabled. (The other three lists remain disabled.)
4. From the drop-down list on the right, choose the command that you want to assign to the selected digitizer button.
5. **To save the change**, click the "Add" button.
6. Repeat steps 1 through 5 as desired. When finished, click the "Ok" button to return to the drawing screen.

Example:

When you want to assign for instance the Left Mouse Button to Button 0 you have to do see the following steps:

- Click at **Button 0** (red arrow) in the 16 button mouse. Or select in Digitizer Button the option "**0**"
- Then select under **Active**: **Mouse**. You want to set a mouse function.
- Only the **Mouse Button field** is accessible, the other fields are greyed out. Select **Left Button**
- Click **Add**
- In the field Command "Left Button"will appear, so you know that this function is assigned to Button 0.



When the digitizer is connected to the computer and properly recognized by PatternMaker you can also click at Button 0 on the digitizer mouse. Button 0 will then be highlighted.

4 Buttons Mouse

In the Configure Digitizer Buttons form a 16 buttons mouse is shown. When you want to use a 4 buttons mouse (which we do not recommend, because you have too less options for assigning commands to the buttons) you will see that the first 4 buttons correspond with your 4 buttons mouse.

If you have a 4 buttons mouse with diamond buttons the buttons are as following:

- Orange = 0
- White = 1
- Green = 2
- Blue = 3

Setting Scale/Rotation

This feature lets you specify the numerical value of the scale and rotation of the digitizer relative to the drawing. (Compare with DRAW ALIGN.)

Procedure:

1. Select "Digitizer" from the **Settings** menu, then select "Configure" from the submenu. The "Configure Digitizer Buttons" dialog box opens.

2. In the "Scale" field, enter the number of drawing inches per digitizer inch. For example, if you enter 2, then one inch on the digitizer tablet equals 2 inches in the drawing. If you enter 0.5, then one inch on the digitizer equals ½ inch in the drawing. If the object you are digitizing is life-size, leave the Scale set at "1."
3. In the "Rotation" field, enter a number representing how many degrees the object you are digitizing is rotated. For example, if a pattern piece is placed on the digitizer horozontally, but you want the drawing in PatternMaker to appear vertical, enter "90" or "-90" to rotate the object ¼ turn.

> *Note: If you have used the* DRAW ALIGN *command the results of that alignment will appear in the Scale and/or Rotation fields. It is not necessary to use both* DRAW ALIGN *and* CONFIGURE *to set the rotation and/or scale.*

See also:

Working With a Digitizer
SET ORIGIN command
Numbering of buttons

Registering PatternMaker

PatternMaker uses a serial number and unlock code system to restrict and unlock the features of the different versions (read about the different versions).

When you load the program, it will be run as the Basic Viewer. The Basic Viewer will run and print the pre-designed patterns, but it does not have any drawing or editing features.
You can register for a free 30-day demo, or you can purchase one of the higher versions which will give you access to more features. (Visit our web site www.patternmakerusa.com for current pricing information.)

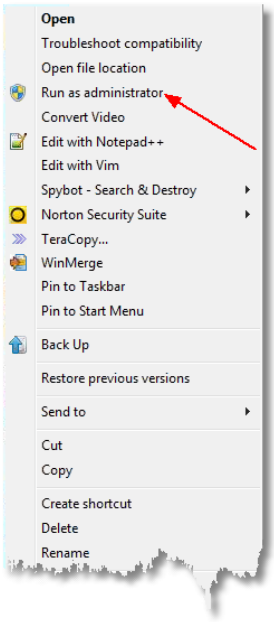
When you ask for a demo or have bought a version you will receive (by mail) a **serial** number that you need for registration.

Procedure:

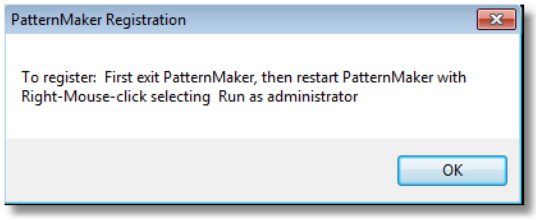
1. Registering is done on internet, therefore you will need an **internet connection** for registering. If you have not an internet connection on your computer/laptop please contact with us for a manual registration.

2. Registering can only be done when you run PatternMaker as an administrator.

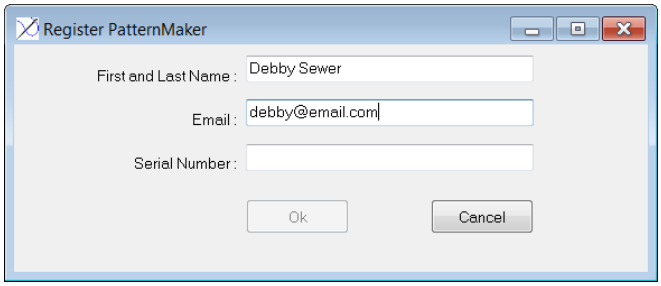
Click with your RightMouse at the icon of PatternMaker on your desktop or via the Start menu.
Select "Run as administrator".
A Windows message appears if you want to allow opening PatternMaker.
Click Yes.
PatternMaker will open.
Select in the Welcome form "Empty page" and click OK.



When you want to register without selecting the Run as administrator option, you will get a message about the way you have to register.


PatternMaker Registration
To register: First exit PatternMaker, then restart PatternMaker with Right-Mouse-click selecting Run as administrator
OK

3. Select in the menu Settings ->Register. The Register dialog box opens:



4. Type in your name, email address, and the serial number you received when purchasing PatternMaker or when you asked for a demo.
5. Click "Ok."
6. You will get a message that you are successfully registered and that it is necessary to exit the program and start it again.
   Now PatternMaker will have the required features.
   After that, you can open PatternMaker in the normal way without the Run as administrator option selected.

When the registration could not successfully be done (eg. because you have no registrations left or you do not have internet connection) you will get a message of the reason.
When this reason is not helpful, please contact us at support@patternmakerusa.com

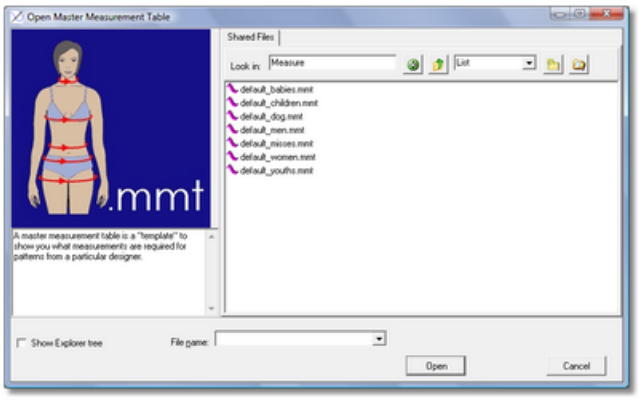
CREATE MEASUREMENT TABLE command

Settings -> Create Measurements

Use this command to save a personal table of measurements for each user. Already with PatternMaker Basic Reader you can save measurement tables.

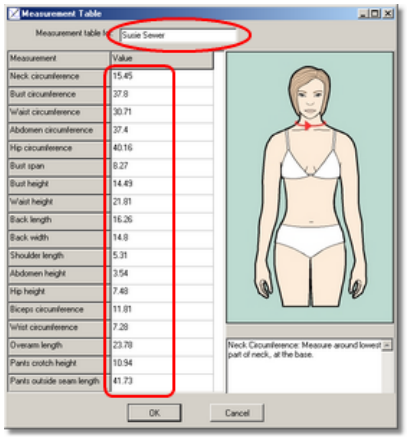
Procedure:

1. Select "Create Measurements" from the **Settings** menu. A dialog box opens, showing the Master Measurement Table(s) (**.MMT** files) that are provided by the macro designer. This is a "template" file that shows which body measurements are required by that person's designs. Each designer will provide his/her own MMT file, and they are not interchangeable.
2. Select the Master Measurement Table for the designer whose macro you are using and click the "Open" button.

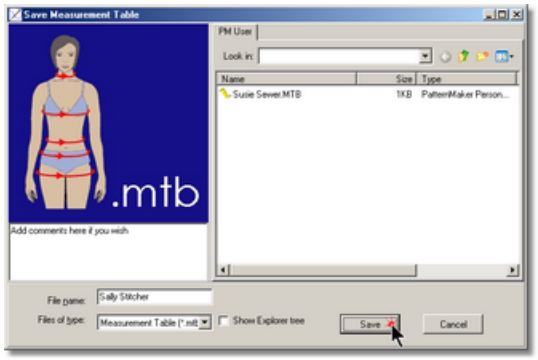


3. Replace the default numbers with your own measurements. This information is taken from your

measurement chart (included with each macro collection). Remember to use decimal numbers, so 8-3/4 inches is 8.75 inches, and so forth. Type 8.75 and not 8,75 . (See the Fraction Conversion Table.)



4. Click the "OK" button. The Measurements LaunchPad window opens. PatternMaker will open in My Documents the folder MeasureTables.
   Give your new measurement file a name and, if you wish, some comments at the left side of the form.



5. Note that the personal measurement tables that you create have an **.MTB** file extension. You will never accidentally overwrite the original Master Measurement Table (.MMT).

See also:

EDIT MEASUREMENT TABLE command

COPY MEASUREMENT TABLE command

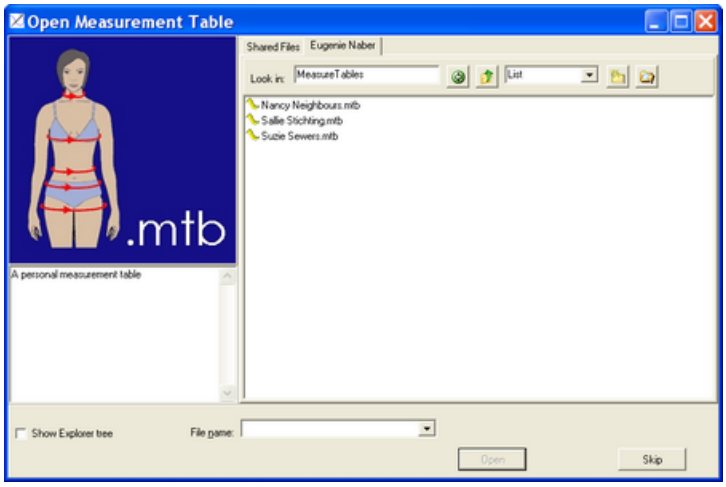
EDIT MEASUREMENT TABLE command

Settings -> Edit Measurements

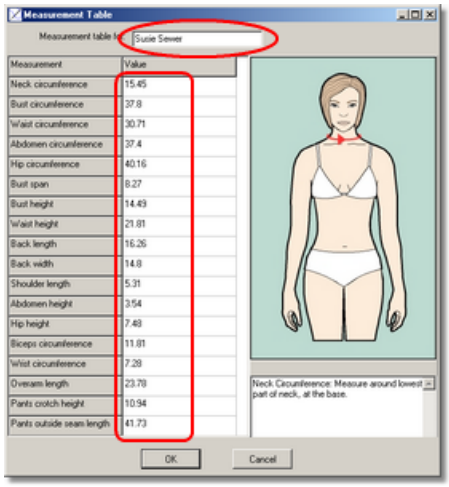
This command is used to make changes to a personal measurement table that has been created and saved.

Procedure:

1. Select "Edit Measurements" from the **Settings** menu. A dialog box opens, showing the personal measurement tables (**.MTB** files) that have been created and saved in the folder MeasureTables in My Documents.



2. Highlight the table you want to edit, and click the "Open" button.



3. Make the necessary changes and click the "OK" button. The file is automatically saved, and you will be returned to the drawing screen.

See also:

CREATE MEASUREMENT TABLE command

COPY MEASUREMENT TABLE command

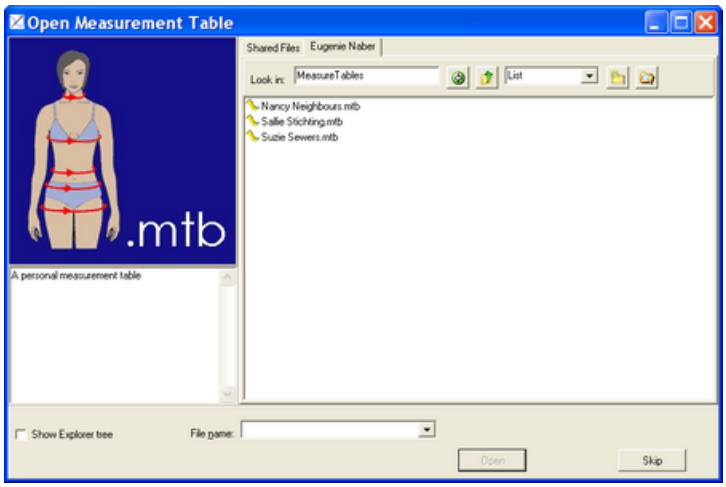
COPY MEASUREMENT TABLE command

Settings -> Copy Measurements

This command is used to make a copy of a personal measurement table that has been created and saved. You can edit an existing measuretabel and save it as another name. The original tabel is also saved.

Procedure:

1. Select "Edit Measurements" from the **Settings** menu. A dialog box opens, showing the personal measurement tables (**.MTB** files) that have been created and saved in the folder MeasureTables in My Documents.



2. Highlight the table you want to copy, and click the "Open" button.
3. The measurement table opens. Make any necessary changes and then click the "OK" button.
4. Save the table with a new name.

This process is exactly the same as EDIT MEASUREMENT TABLE, except that this command gives you a chance to rename the file, while the original file is also saved.

See also:

CREATE MEASUREMENT TABLE command

EDIT MEASUREMENT TABLE command

Configure/Configure Defaults

There are two ways to configure PatternMaker:

1. You can set drawing properties, viewing options, and program behaviors that will be in effect **on the opened file** (*Configure*).
   Some drawing options you can change in the status bar on the screen. These changes will be visible in the Configure form.
   Some changes, you want to make have to be done in the Configure form itself like background color.

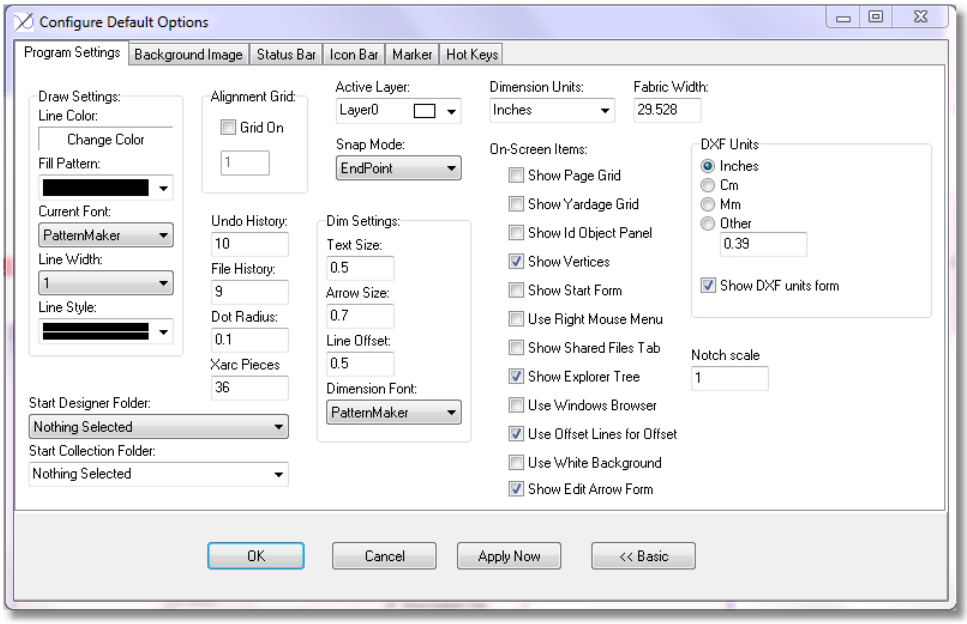
2. You can choose settings that will be in effect **every time you start PatternMaker** or **open a new or saved file** (*Configure Defaults*).

When you open these two forms, they may display different information.
The *Configure Defaults* form shows how PatternMaker will start up every time you open the program or a new or

saved file.
The *Configure* form will display the current settings, reflecting any changes you may have made in the current drawing.

Configure Program Options: Program Settings

From this screen you can change many things having to do with the way PatternMaker looks and acts. When you do not see the form as it is shown here click the "Advanced button" on the bottom of your form.



- Draw Settings — Determine the appearance of objects
- Start Folders — Set where LaunchPad opens
- Grid Settings — Toggle grid on/off and change grid spacing
- Undo History — Change number of steps you can Undo
- File History — Change number of most-recently-used files on File menu
- Dot Width — Change radius of "dot" pattern markings
- XArc Pieces — Change the smoothness of curves
- Active Layer — Selects the active layer
- Snap Mode — Selects a snap mode
- Dim Settings — Change how Dimension objects are displayed
- Meas Units — Select inches or centimeters as your working units
- Fabric Width — Define the width of fabric you will use for your pattern layout

• Show Page Grid	Turn page grid on/off
• Show Yardage Grid	Turn yardage grid on/off
• Show ID Obj Panel	Turn ID Object Panel on/off
• Show Vertices	Turn points on/off
• Show Start Form	Show Start Form when PatternMaker opens
• Use Context Menus	Turn right-click context menus on/off
• Show Shared Files	Show the "Shared Files" location for opening and saving files
• Show Explorer Tree	Show the Tree view in the LaunchPad windows
• Use Windows Browsers	Toggle LaunchPad interface
• Offset Lines	Toggle Offset Lines/XArc mode for drawing curves
• White Background	Toggle background color from white to black
• Show Add Arrow Form	Open Arrow form directly after adding a grading arrow
• DXF Units	Set the default units for opening and saving dxf files
• Notch scale	Set the size of the used notches in a scale

See also:

Configure: Set Background Image
Configure: Hot Keys
Configure: Status Bar
Configure: Icon Bar
Configure: Marker Settings

Configure Program Options: Background Image

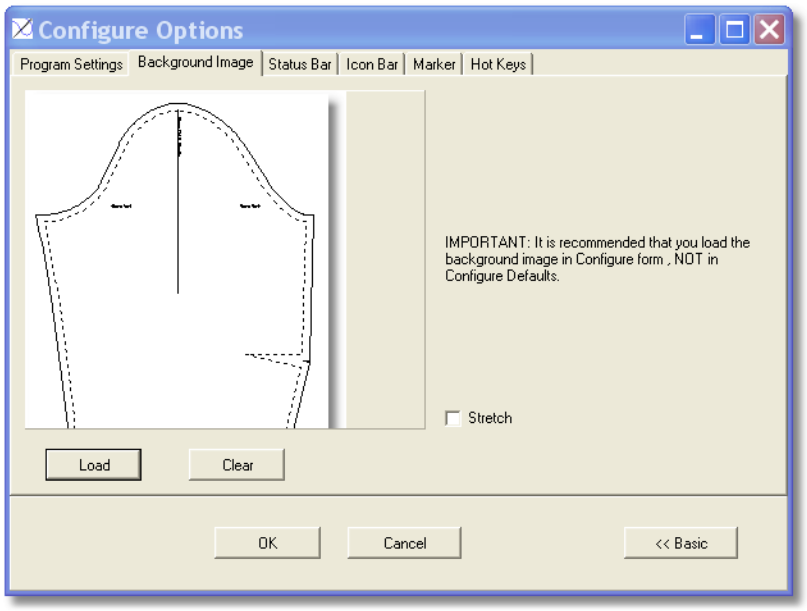
With PatternMaker Professional Studio or higher, you can select a bitmap file (file extension **.bmp**) to use as a background image in the drawing area. You can use this feature to import a scanned image of a garment or a pattern piece, select it as the background image, and then use the drawing tools to trace over the image. See Using bitmap background images for more information.

The *Background Image* tab of the Configure form controls the display of a background image. If the image area of the form is blank, there is no background image selected.

It is recommended that you load in the background image in the **Configure form, not in Configure default**. If you would load it in in Configure default it would always be loaded in when opening a file or PatternMaker.

To load an image:

1. Click the "Load" button. The "Open File" dialog box appears.
2. Navigate to the location of the bitmap file (.bmp) you want to useas the background image.
3. Double-click the file, or select the file and click the "Open" button. The bitmap image will be shown in the display box.



4. Consider whether you want to use the "stretch" option. If this box is checked, the picture will be resized to fit the drawing area, but its proportions will be distorted. If you do not want to change the proportions of the image, leave this box unchecked. (However, see note below.)
5. Click the "OK" button. The image you selected will be displayed in the upper left hand corner of the drawing area.

To remove the background image:

Go to the *Background image* tab of the Configure form and click the "Clear" button. The bitmap image will be removed.

Note:

The background bitmap is, literally, in the background. It cannot be moved, resized, zoomed, or scrolled. Therefore, if your scanned image is too large to fit into the drawing area, you will not be able to trace the entire image. One way around this problem is to use the "Stretch" option on the *Background Image* tab of the Configure form.

Using "Stretch" will result in the image being distorted; however, after you have traced it, you can use the RESIZE command to ensure that your traced objects are the proper size. Measure horizontally on your original paper pattern, then use the X-measure option of the RESIZE command to adjust the POLY object to the same dimensions. Then measure vertically on the original pattern, and use the Y-measure option of the RESIZE command.

If your original scan fits in the drawing window without using "Stretch," the proportions will not be distorted. You can probably use the SCALE command, rather than RESIZE, since it adjusts both the vertical and horizontal dimensions at the same time. (Use the X/Y-Measure option of the SCALE command.)

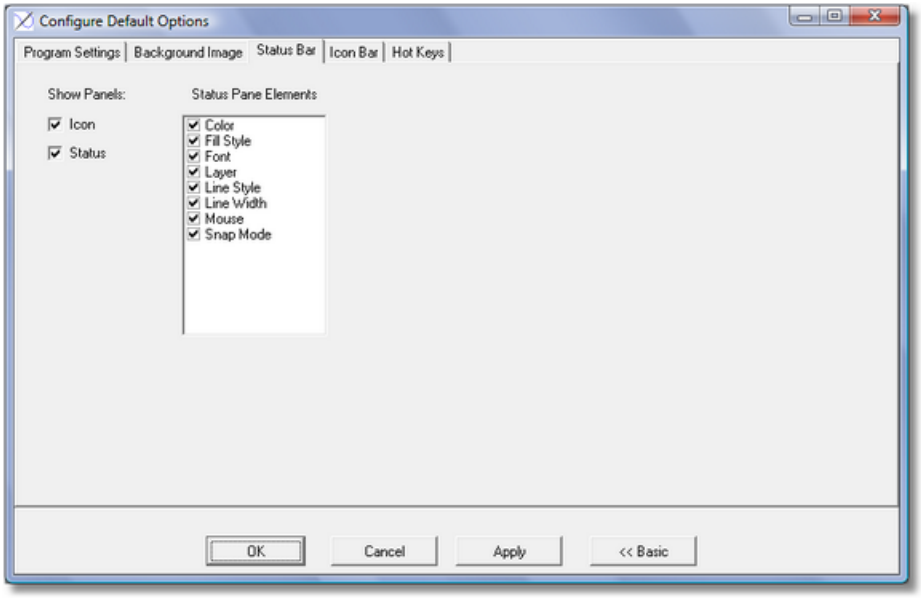
See also:

Configure: Program Settings
Configure: Status Bar
Configure: Icon Bar
Configure: Marker Settings

Configure: Hot Keys

Configure Program Options: Status Bar

This tab controls what is visible in the main drawing window:



Show Panels:

Icon If this is checked the icon pane is displayed

Status If this is checked the status pane is displayed

Status Pane Elements:

This controls which elements of the status bar pane are displayed. If an element is checked it is displayed in the status bar. (Remember, you might not see all of these options in your version of PatternMaker.)

See also:

Configure: Program Settings

Configure: Set Background Image

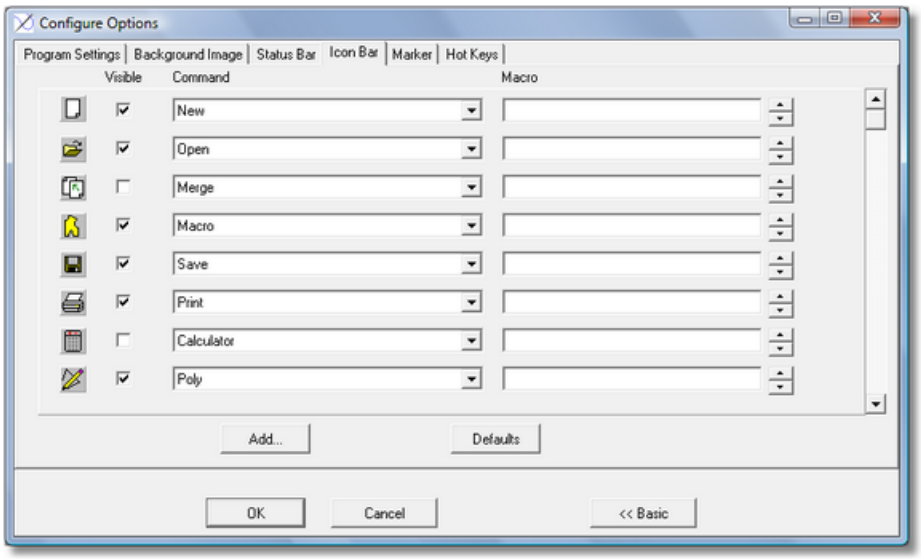
Configure: Icon Bar

Configure: Hot Keys

Configure: Marker Settings

Configure Program Options: Icon Bar

This tab is used to control the appearance of the icon bar. Icons can be added, hidden and changed. Macros can also be attached to a button. Both the command and the image associated with the icon can be modified.



Changing an image:

1. Click on the image you want to change.
2. Select the new bitmap to be displayed.
3. Click the "OK" button.

There are 20 custom images provided with PatternMaker that you can use as you wish.

Changing a command:

1. Use the drop-down box to the left of the image to select a new command.
2. Click the "OK" button.

The default command may be left blank if the version of PatternMaker you have doesn't support the command associated with the bitmap (for example, the EDIT ARROW command in the Professional Studio).

Adding a PatternCollection/Macro:

1. Double click in the macro edit field which is to the right of the command field. An open file dialog will appear.
2. Select the Designer and Collection Folder you want and open these.
3. Select the right collection

The collection/macro you select may be a frequently-used garment macro, or it may be any other sequence of actions that a programmer or designer has saved as a macro.

Removing a Macro:

Delete the file name in the macro edit field. If there is text in the macro edit box it will over ride the command associated with the icon.

Rearrange the icons:

Click the up/down arrows to reorder the buttons on the icon bar

Hiding an icon:

Uncheck the "visible" checkbox to the left of the macro Edit box

Adding an icon:

If you click on the Add button an empty icon will be added at the beginning of the list. A bitmap, a command or macro will need to be assigned to it. It will also need to be made visible.

Defaults:

Use the Defaults button to restore the buttons to the default settings. PatternMaker must be restarted for this command to take effect.

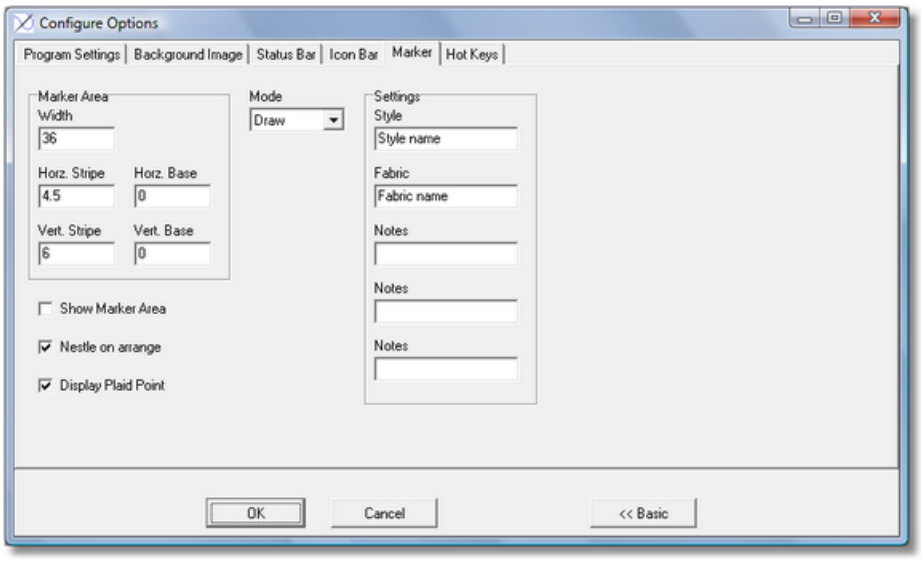
See also:

- Configure: Program Settings
- Configure: Set Background Image
- Configure: Hot Keys
- Configure: Status Bar
- Configure: Marker Settings

Note: When the icons are not visible in the iconbar it could be possible that the connecting commands are not filled in (the field is blank). Click on the arrow in the field and search for the right command, select it and make sure that in the field Visible the checkbox is checked. See for a list of the icons .

Configure Program Options: Marker Settings

Set options concerning the marker layout.



Marker Area

This is the same information as appears if you select the SET MARKER AREA command from the Marker menu.

Width The width of the marker in inches. This is normally the usable width of your fabric.

Vert. stripe The spacing between vertical stripes on your fabric. (A vertical stripe is one that is vertical as seen on your computer screen.) Enter the distance between pattern repeats, not the distance between

individual stripes. If your fabric has horizontal stripes only, set this to zero.

Horiz. stripe The spacing between horizontal stripes on your fabric. If your fabric has vertical stripes only, set this to zero.

Vert. base The distance from the lower edge of the marker to the beginning of your fabric's pattern. This is the point where the horizontal stripe/plaid repeats will be measured from.

Horiz. base The distance from the left edge of the marker to the beginning of your fabric's pattern. This is the point where the vertical stripe/plaid repeats will be measured from.

If you aren't using a striped or plaid fabric, you can ignore all of the numbers except the marker width.

Mode

Toggles the screen between Drawing mode and Marker mode. This effect can also be toggled with a drop-down box on the Status Bar

Settings

This is the same information as appears if you select the MARKER SETTINGS command from the **Marker** menu. The notes and information entered here appear on the MARKER REPORT

See also:

Configure: Program Settings

Configure: Set Background Image

Configure: Status Bar

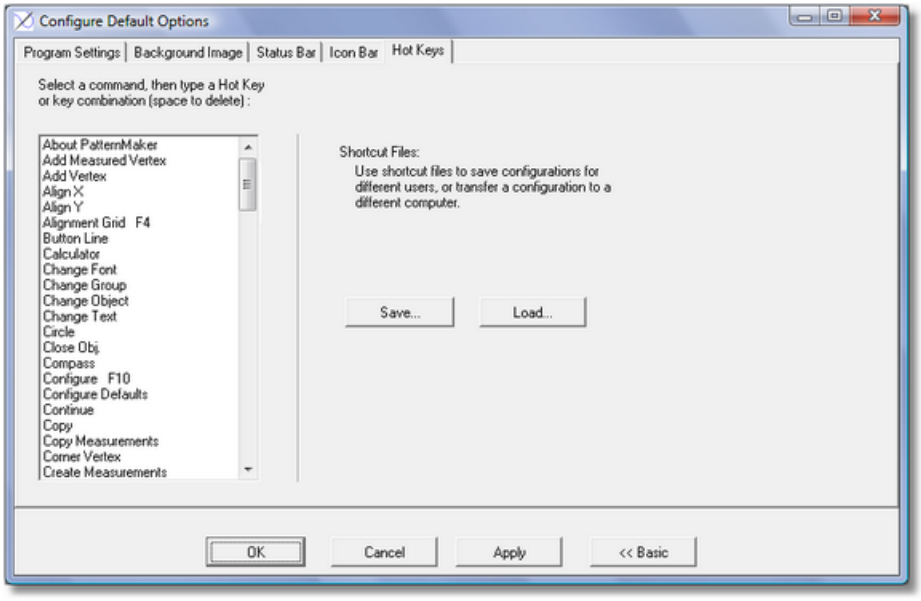
Configure: Icon Bar

Configure: Hot Keys

Configure Program Options: Hot Keys

This feature gives you the option of reprogramming the standard Hot Key assignments. If you find the <Ctrl>+<F> combinations too awkward for using the Snap modes, feel free to change them to something more convenient!

You can also save different sets of Key assignments, in case you'd like to use different keys depending on what you're doing.



Configuring the Hot Keys:

- Scroll through the list of commands to find the one you want.
- Press the key or key combination you want to use. You can use any combination of <F > keys, arrow keys, <HOME>, <END>, <INS>, <DEL>, <CTRL>, and <SHIFT>.
- <ALT> combinations are not available.

The Hot Key configuration files are saved in the user settings for each profile on the computer. This means that everyone who logs on to the computer can save the Hot Keys the way they like them best. You can also move your configuration file to a different computer.

See also:

Configure: Program Settings
Configure: Set Background Image
Configure: Status Bar
Configure: Icon Bar
Configure: Marker Settings

6.8 Help Menu Commands

HELP command

Help -> Help Contents

Use "Search," above, to select a topic from PatternMaker's list of commands.

For Icons: click right button of mouse on icon.

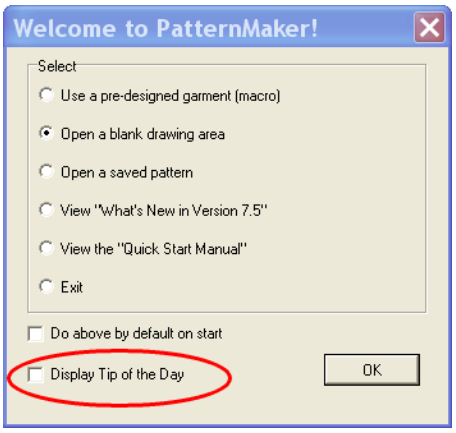
Click on the green underlined text to jump from topic to topic within the Help file.

Use the "Back" button to go back to a topic you have already visited.

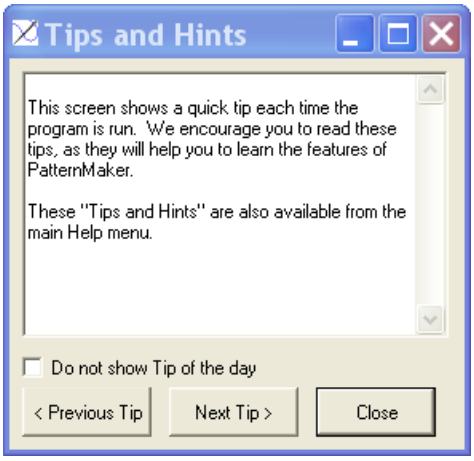
Use "Print Topic" from the **File** menu of the Help program to print out any topic as you are viewing it.

TIPS AND HINTS

The "Tips & Hints" feature has been added to help you make the most of your PatternMaker experience by pointing out useful things you may not be aware of.



If the "Display tip of the day" checkbox is marked, the next dialog box that opens displays the tip:


Tips and Hints
This screen shows a quick tip each time the program is run. We encourage you to read these tips, as they will help you to learn the features of PatternMaker.
These "Tips and Hints" are also available from the main Help menu.
Do not show Tip of the day
< Previous Tip
Next Tip >
Close

If you do not wish to view the Tip of the Day, just clear the checkbox on the Start Form or the Tips and Hints form. (If you have turned off the Start Form, you can display it again with an option on the Configure form.)

CALCULATOR

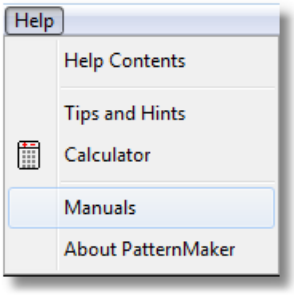
Help -> Help Calculator

Selecting this option will launch the Windows calculator. This tool can be useful as you work with your pattern, if you need to add measurements together, etc.

MANUALS

When you select the Manuals command the folder Documentation in PatternMaker will be opened.

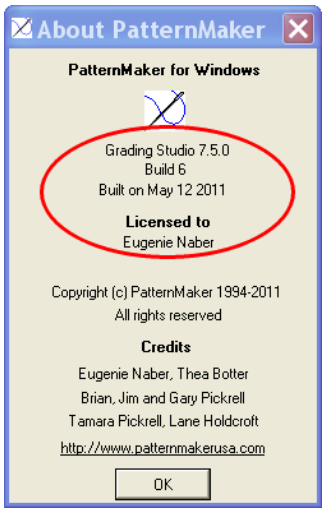
In this folder you will find all the available documentation about working with PatternMaker like the manuals of each version and the Quick Start manual.



ABOUT... box

The About box displays the copyright information for PatternMaker.
It also tells you which version you are using, the build number and to whom the program is licensed to.
If you need to request technical support, the build number can be given to PatternMaker personnel in order to determine if you have the latest version.

You can also connect to the PatternMaker web site from this box. Just click on the link and it will automatically launch your browser.



If you are not registered or not registered correctly, the version will be shown as "Basic". For registering, follow the instructions you were given after purchasing the program or after asking for a demo.
See also: Registering PatternMaker

Advanced Features

This section discusses grading and markers. These features are only available in PatternMaker Grading Studio and PatternMaker Marker Studio.

7.1 Grading Overview

Grading is the process of taking a single pattern and using it to make a full set of different sizes. By hand, this is a slow process and it's hard to be accurate. With PatternMaker, you can grade an entire pattern with a single command, and the computer ensures that the results are accurate.

PatternMaker also lets you define standard grading rules, save them in tables, and apply them to different patterns. For instance, you could create your own "Women's pants" grading rule and apply it to any women's pants pattern.

Note:

With PatternMaker Professional Studio you can use the grading command only if the pattern in question has been created with a higher version of PatternMaker and includes grading arrows. You must have PatternMaker Grading Studio or Marker Studio to create and load grading information.

Establishing grading rules

A grading rule tells PatternMaker how to make an item one size larger or smaller. For instance, a pants grading rule may say that the waist measurement is one inch larger for each successive size.
In PatternMaker, a grading rule is defined by grading arrows. Each arrow tells PatternMaker where to move a certain point to create the next size. When it makes, saves, and reads grading tables, PatternMaker is really reading and copying grading arrows.

The various commands used in grading are found in the **Grade** menu. Here is the basic sequence of events in the grading process:

Create a grading rule:

- Draw your pattern.
- Add grading arrows. Use the ADD ARROW command to put arrows on some of the points of your pattern pieces.
- Adjust and name the arrows. If your grade is different for different sizes, set the different grades now. Use the EDIT ARROW command.
- Add arrows to other objects, such as darts. Use the various arrow commands to apply the basic grading information to these secondary objects.
- The pattern is now ready to grade.

Save a grading rule:

- Select the SAVE TABLE command.
- Select some objects with grading arrows. All arrows attached to the objects you select will be saved in the table. (You don't need to save everything in one table – if your pattern has both a blouse and pants, you might want to save the grading information in two separate files.)
- Give the table a name and description.
- PatternMaker will create a grading table and save it in the file (*.**GRD**).

Read a grading rule into a pattern:

- Open up a drawing with objects that need to be graded.
- Select the LOAD TABLE command.

- Select a grading table file (***.GRD**).
- Place the arrows on the object(s). For each arrow in the table, PatternMaker tells you the name of the arrow and you tell it which point to add the arrow to. You can skip arrows that you don't need.
- The pattern is now ready for grading. All the grading information from the original pattern is in the new pattern. If you need to modify the grading rule for the new pattern, you can use the various Grading commands to edit the grading arrows.

To grade a pattern:

Note: The GRADE command is the only grading operation available in PatternMaker Professional Studio.

- Open a drawing that contains grading arrows, or create grading arrows in your current drawing.
- Select the GRADE command.
- Select the objects to be graded. Anything you don't want more copies of, don't select.
- Enter the number of sizes to generate and the interval between the sizes. If you have drawn size 10 and you want to create sizes 12, 14, and 16, you would enter 3 sizes and an interval of 2.
- PatternMaker draws the new objects. The objects for each new size are on a different layer (see Using Layers).

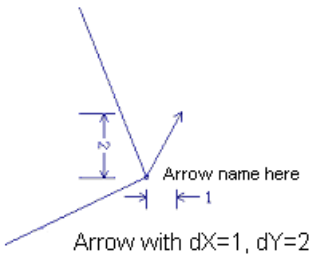
Grading arrows

Grading arrows are the basis of PatternMaker's grading system. When you grade an object, you create a nest of larger (or smaller) objects. Each new object has the same number of points as the original, but they are in different places. A grading arrow tells PatternMaker where to put each point to make the next larger size.

Any vertex (point) of any type object can have an arrow. A point doesn't have to have an arrow, but you can't have an arrow without a point.

You can hide or show the arrows by pressing <F7>. This Hot Key cycles between three settings: show arrows, show arrows names, and show arrows values. Hiding the arrows may make the program work faster.

This is what a close-up view of an arrow looks like:



Each arrow tells PatternMaker to move its point a certain amount in the X (horizontal) direction and a certain amount in the Y (vertical) direction. These are called the dX and dY values. A grading arrow has a dX value and a dY value for each size, and a name.

An arrow can have different dX and dY values for different layers. The arrow you see on screen shows the grade for the layer the object is on. If you grade the object for several sizes, the dX and dY values for each size in turn are used. If you change the object's layer with the Change command, its arrows will change size accordingly. Use the EDIT ARROW command to see all of an arrow's values.

Note: It's up to you, when you create the grading arrows, to define what a jump of one size means. For instance, if your pattern only comes in even sizes, you can set your arrows to grade from size 8 to size 10; from 10 to 12, etc. and name your layers "Size8," "Size10," "Size12"... To PatternMaker, the jump from size 10 to size 12 would be one "size," not two.

Things to keep in mind about grading arrows:

- When you draw a pattern piece, you will typically draw it as several objects: the main piece, the grain line, darts, alignment marks, etc. When you grade, you have two choices: grade just the pieces you will cut out of the material, or grade everything. If you grade objects such as darts, you need to attach arrows to make them move to their new positions.
- If you grade an object with no arrows, the copy will be exactly the same as the original, and is drawn right on top of it. Do this if you need identical objects on different layers.
- If you grade an object with one arrow, the copy is moved but its size and shape don't change.
- If you grade an object with two arrows, the copy may be moved, rotated, or enlarged, but it will be the same shape as the original.
- If you grade an object with more than two arrows, it will change both size and shape.
- Grading arrows are saved when you save a drawing.

Hint: Use the Interp Arrow command to add arrows to objects that need to "follow" other objects' grading arrows.

Hint: When you read a grading table, make sure the objects are oriented the same way as the objects in the original file. If you try to read a table for a vertical object into a horizontal object, or a mirror image, it won't work. Instead, rotate the objects into the same positions, add the arrows, and then rotate them back the way you want them.

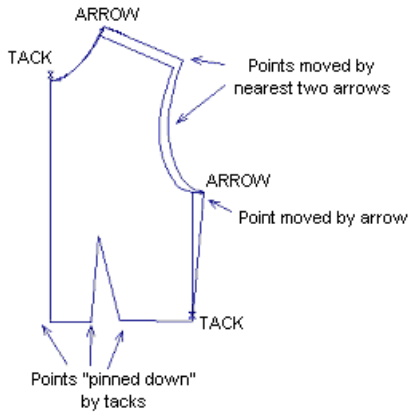
Hint: If you already have different-sized objects in your drawing but you don't know what the specific dX and dY values for your grading rule should be, you can create the arrows graphically. For example, you might place a size Medium piece on top of a size Small piece. Add arrows to the points of the Small piece with ADD ARROW. For the head of each arrow, use Snap to End Point to connect to the corresponding point of the Medium piece. This creates a grading rule you can save.

Tacks vs. grading arrows

If an arrow has dX and dY values of 0 for the layer it is on, it is drawn as a tack. Tacks are drawn on the screen differently than arrows, but they work the same way. A tack tells PatternMaker not to move its point when you grade the object.

If a point doesn't have an arrow, PatternMaker works around the object point-by-point until it finds the nearest arrow in the clockwise direction, and the nearest arrow in the counterclockwise direction (see illustration below). Then it uses these two arrows to calculate a position for the point by interpolation. What this means to you, the user, is that you only need to define arrows for a few points per object, and PatternMaker will take care of the rest.

If an object has two tacks with some points between them that don't have arrows, the points without arrows will not move when you grade the object.



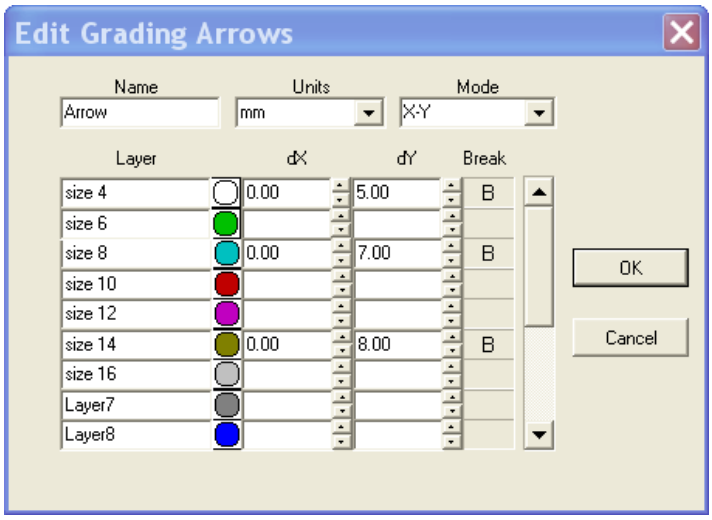
Using breakpoints

Your grading rule can specify a different grade for different size ranges. For instance, each size up to size 12 might be an inch larger in the waist than the previous size. Then each size larger than 12 might be 1 - ½ inches larger in the waist. Your grading rule can have "breakpoints" at certain sizes where the grade rule changes. Use the EDIT ARROW command to view and set an arrow's breakpoints. If you want to keep grade without breaks, just set the dX and dY values for Layer 0 and leave the rest blank.

When you first create an arrow, the only breakpoint is at Layer 0. This means that when you grade the object, the increase from each size to the next size will be the same. Many pattern cutters do not use a constant grade. For instance, all sizes up to size 8 might grade one way, then there will be a larger increment for sizes 8 - 14, then a larger increment for sizes above 14. The sizes at which the grade increments change are called breakpoints.

> *Note: Each arrow in your drawing has its own break points and values. It is possible for different arrows in the same pattern to have breaks at different sizes. If you want them to all break the same way, you have to set the breaks in each arrow.*

Set or clear a breakpoint for a layer by clicking in the corresponding "**Break**" box. (Or, if you enter values in the blank dX and dY areas, the layer will automatically become a breakpoint.)
A "**B**" appears in the box if that layer is a breakpoint.
To remove a breakpoint, click on the break point box with a "B" in it and the "B" will disappear. Then the dX and dY values will follow the last previous breakpoint.



See also:

Arrow display modes
EDIT ARROW command

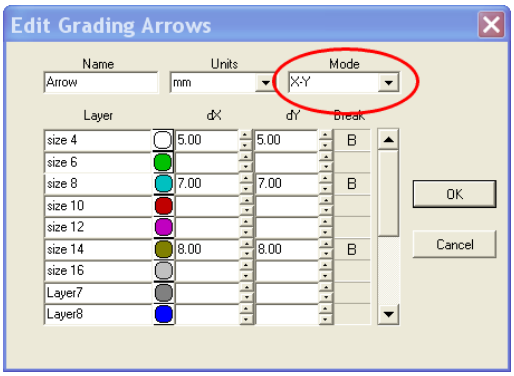
Grading Arrow Display Modes

There are four modes for displaying the values for an arrow: X-Y, Polar, Relative, and Scale. Keep in mind that whichever mode you select, the length and direction of the arrow are the same. The only thing that changes is the way the information is shown to you.

You may use any of the modes to adjust the arrow. If you change the values in one mode, the arrow will automatically be recalculated when you switch to another mode.

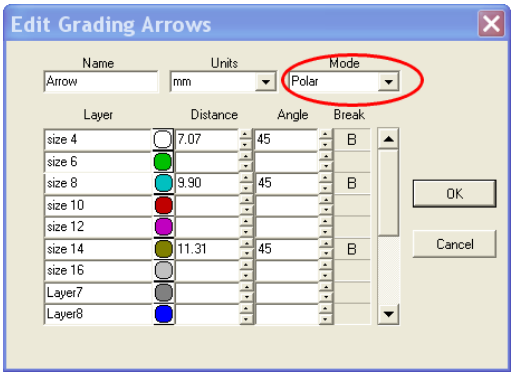
X-Y MODE

In X-Y mode, the dX and dY values of the arrow are shown for each layer. Most commercial grading methods use dX and dY values to set grades (although they may use different names, they mean the same thing).
The *dX* value indicates how much the arrow moves in a horizontal direction from one layer to the next, and the *dY* value indicates how much it moves in a vertical direction.



POLAR

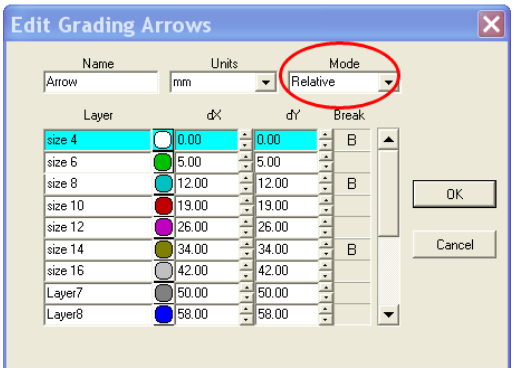
In Polar mode, the values are shown as "dist" (the length of the arrow) and "angle" (the direction of the arrow). Angles are calculated in the usual way: 0 degrees goes to the right, 90 degrees goes straight up, and so on. This mode is useful if you know the length you want for an arrow but want to set the direction "by eye." First draw an arrow going the right direction, then use EDIT ARROW to set the length.



Hint: To reverse the direction of an arrow, leave the angle the same but change the length to a negative number. The program will recalculate the arrow with the new direction and a positive length.

RELATIVE

In Relative X-Y mode, values are also shown as dX and dY values, but one layer is highlighted and the values for the other layers are relative to this layer. You will usually use this mode with your base size as the highlighted layer. For example, if you are drafting a Size 10, and intend to grade up and down from there, highlight the "Size 10" layer. The numbers for the other layers represent the ***total amount of change*** from that layer to Size 10.



Example:

- Set the Edit Arrow "Units" to 1/8".

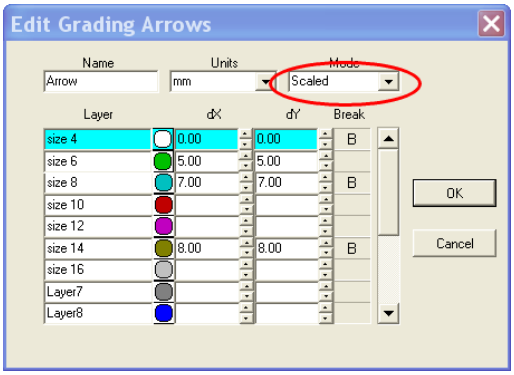
- Size 10 is your base size. You define an increase of 1/8" from size 10 to 12, and an increase of 3/8" from size 12 to 14.
- Highlight the layer for Size 10. The layer for Size 12 says "1/8" and the layer for Size 14 says "1/2" (one-eighth for size 12 plus three-eighths for size 14 equals four-eighths, which equals one-half).

Note: Although there are no "minus" signs used in the Edit Arrow box, please note that numbers entered for sizes smaller than your **base size** indicate a decrease in size. Each set of numbers on a "smaller" layer indicates how much the pattern is to be graded down.

Note: The dX and dY values for the highlighted layer will always be "0", because a layer does not change as compared to itself.

SCALE

The Scale mode is similar to the Relative mode, except that each layer shows the ***incremental change***, rather than the ***total amount of change*** from one layer to the next.



Example:

- Set the Edit Arrow "Units" to 1/8".
- Size 10 is your base size. You define an increase of 1/8" from size 10 to 12, and an increase of 3/8" from size 12 to 14.
- Highlight the layer for Size 10. The layer for Size 12 says "1/8" and the layer for Size 14 says "3/8."

  Note: Although there are no "minus" signs used in the Edit Arrow box, please note that numbers entered for sizes smaller than your base size indicate a decrease in size. Each set of numbers on a "smaller" layer indicates how much the pattern is to be graded down.

  Note: The dX and dY values for the highlighted layer will always be "0", because a layer does not change as compared to itself.

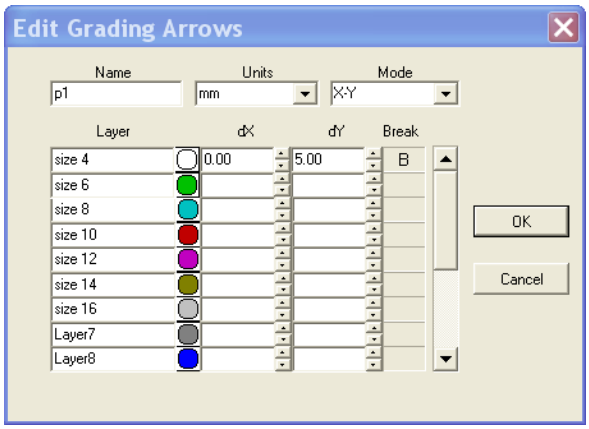
See also:

Using breakpoints

Layer names and colors

On the left of the Edit Grading arrow form the names of each layer are visible. To select a layer in Relative or Scale mode, click on that layer. In the other modes, these names are only for your information and there is nothing for you to change here. Similarly, the layer colors are only displayed for your information.

To change the name or color of a layer, use the LAYER command (<F11>), on the **Settings** menu.



Reviewing your arrows

With a big pattern, it can be difficult to check all your grading arrows one by one to see if they are correct. The best way to do this is to use the SAVE TABLE command to write all of your arrows to a text file, and then use a text editing program to look at this table.

Since PatternMaker's grading table files use plain ASCII text, any text program, such as the Windows Notepad, can read them. You must give your arrows unique names before you do this, or you won't be able to tell them apart when you read the table.

Note: It's possible to use a text editing program to change a grading table file, although we don't give instructions for doing this. If you do change one of these files, remember that your changes will have no effect on any PatternMaker drawing until you use LOAD TABLE to read the table into a pattern.

Another way to quickly check your arrows is to simply grade the pattern. Look at the nest that is created and see if anything is out of place. Then, if you weren't ready to use the nest of pieces you just created, simply use UNDO to get rid of them.

See also:

EDIT ARROW command

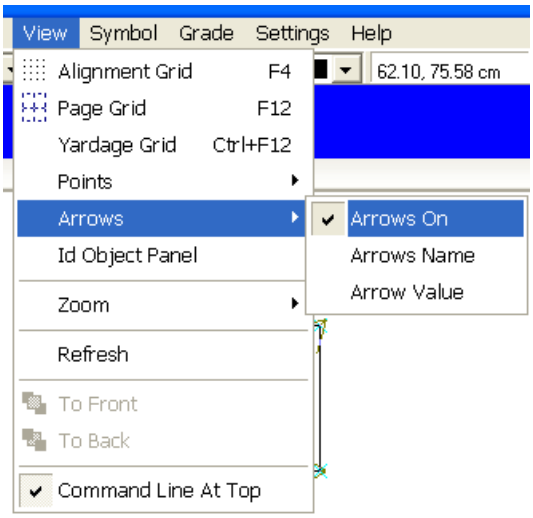
Arrows on

View -> Arrows->Arrows On

ARROWS ON shows or hides the grading arrows. You can also use the shortcut key <F7> for this command.

Procedure:

- Select "Arrows" from the **View** menu. A submenu opens. A check mark appears in front of the menu item "Arrows On" if the arrows are turned on.
- You can also use the shortcut key <F7> for this command.



It is also possible to turn of/off the Arrow Names or Values. See the links down .

See also:

- ARROWS VALUE
- ARROWS NAME
- ADD ARROW command
- GRADE command

7.2 Grade Menu Commands

The **Grade** menu includes all the commands related to grading -- adding and editing grading arrows, creating a grading table, and the actual grading operation.

Note:

With PatternMaker Professional Studio you can use the grading command only if the pattern in question has been created with a higher version of PatternMaker and includes grading arrows. You must have PatternMaker Grading Studio or Marker Studio to create and load grading information.

GRADE command

Grade -> Grade

The GRADE command converts a garment pattern from a single size to a nest of sizes, based on the grading arrows already in the drawing. Each new size is placed on a different layer.

Procedure:

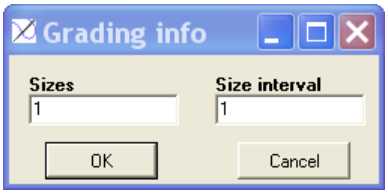
1. Each object to be graded should have grading arrows already attached. (Use the ADD ARROW and EDIT ARROW commands.)
2. Select "Grade" from the **Grade** menu. The prompt on the command line says `Select objects to grade:`
3. Click LM on one or more objects to be graded.
4. If you are **done with selecting objects** click **RM** .
   If the Right mouse Context menu is set On you will get a menu to choose from. Select **Done Selecting**.

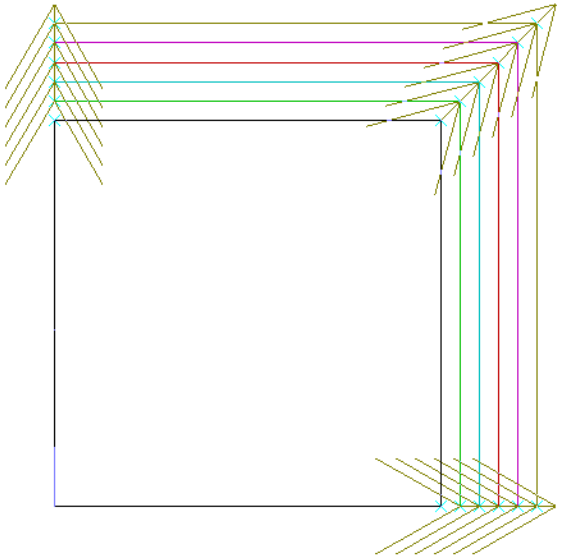
A dialog box will come up with two fields:

- **Number of sizes:** If your first piece is Size Small, and you want to generate Medium, Large, and Extra Large, then the number of sizes to generate would be three.
- **Size Interval:** The length of an arrow represents one size. If you want a jump of more than one size between each item you create, indicate that information here. A negative size interval creates smaller sizes instead of larger ones.

  Note: *It's up to you, when you create the grading arrows, to decide what a jump of one size means. For instance, if your pattern only comes in even sizes, a jump from Size 8 to Size 10 would be one size, not two.*

5. After you enter the numbers, click the "OK" button. Objects in the new sizes will be generated and the command is complete. Each size will be on a different layer with a different color.





Graded in 5 extra sizes

See also:

ADD TACK command
MOVE ARROW command
COPY ARROW command
DELETE ARROW command
INTERPOLATE ARROW command
INSERT TABLE command
SAVE TABLE command

INSERT TABLE command

Grade -> Insert Table

INSERT TABLE loads a grading table from a file into the current drawing. INSERT TABLE does not automatically insert point names. The program asks which point is connecting to Arrow 1, Arrow 2 etc. from the grading table and inserts the grading information to the selected points. When you load the table, the grading information is added to the points (object(s) in your drawing. The grading information is displayed as arrows.

It works the same way as LOAD TABLE, except that with LOAD TABLE the points of the objects have been giving point names and by inserting the grading table PatternMaker adds the grading information to the connecting points.

The objects receiving the arrows should be oriented the same way that the table was intended for, i.e. arrows for a right side piece can't be read into a left side piece, etc.

Procedure:

1. Select "Insert Table" from the **Grade** menu. An "Open File" dialog box is displayed, listing available grading tables. Grading tables have filenames ending with "**.GRD**".
2. Select a grading table and then click the "OK" button.
3. Now PatternMaker prompts you with a name of each grading arrow in the table (the name of the arrow, as assigned in the Edit Arrow window, the asked order is the order of the arrows when you saved the table).
4. For each arrow, click **LM** on the point that the arrow is to be added to. If you don't want to add a particular arrow to your pattern, press click **RM or** <ESC> . Continue until PatternMaker stops prompting you for points.

The points with no connecting grading arrow do not get grading information.

See also:

SAVE TABLE command
EDIT ARROW command
INTERPOLATE ARROW command
GRADE command

LOAD TABLE command

Grade ->Load Table

LOAD TABLE loads a grading table from a file into the current drawing, using the point names that are given to all the points in the object(s).
When you load the table, all the point names added to the object(s) in your drawing, that are also known in the grading table, will get the grading information. The grading information is displayed as arrows.

The objects receiving the arrows should be oriented the same way that the table was intended for, i.e. arrows for a right side piece can't be read into a left side piece, etc.

This command works the same way as INSERT TABLE, but with that command no point names have been added to the point and the program is asking which point is connecting to Arrow 1, Arrow 2 etc from the grading table.

Procedure:

1. Name all the points in your drawing with connecting point names in your grading table. See SYMBOL/NAME POINT
2. Select "Load Table" from the **Grade** menu. An "Open File" dialog box is displayed, listing available grading tables. Grading tables have filenames ending with "**.GRD**."
3. Select the object(s) you want the grading table added to **LM, RM**.

4. Select a grading table and then click the "OK" button.
5. PatternMaker will add to each known point in the selected object(s) the grading information. You will see arrows and tacks added to all known points. In the Edit Arrow window you can see the exact grading information.
6. Each point name that is not recognized in the grading table will not get an arrow. It is very important to use exact the same point names.

See also:

SAVE TABLE command
EDIT ARROW command
INTERPOLATE ARROW command
GRADE command

SAVE TABLE command

Grade -> Save Table

The SAVE TABLE command creates a grading table file from the arrows in the current drawing and saves the information in a file. To use the table, use the LOAD TABLE command.

Procedure:

1. Create a pattern with grading arrows, if you haven't already done so. Use the various arrow commands to do this. Make sure each arrow has a name that describes where it goes.
2. Select "Save Table" from the **Grade** menu. The command line prompts you to select an object. Click **LM** to select each object that you want to have as part of this particular grading table. For example, you can select all the pieces of a bodice pattern, or just the sleeve.
3. If you are **done with selecting objects** click **RM** .
   If the Right mouse Context menu is set On you will get a menu to choose from. Select **Done Selecting**.
   A "Save Grading Table" dialog box will appear with all Arrow names. Here you can define the order in which you want to save the arrows. You can use the up and down arrow keys you can move up or down the arrows.
   Click the "OK"button when you are done.
4. A Save File dialog box appears. Type a name for the table in the Name field.
   At the left side you can type in all kind of information about this grading table eg. a description of the type of garment the grading table is used fo.
   Click the "Save" button.

Note: the order the grading arrows are saved in the table is NOT the order you created the grading arrows.
The order of the grading arrows in the table is the order **the points** are made in the object!!
When you do not like this order you can change it by moving the grading arrows, using the up and down arrows.

See also:

ADD ARROW command
ADD TACK command
EDIT ARROW command
GRADE command

ADD ARROW command

Grade -> Add Arrow

ADD ARROW attaches a grading arrow to a vertex of an object. Grading arrows contain the information used to grade patterns. A grading arrow can be attached to any vertex in any type of object.

Procedure:

1. Activate the ADD ARROW command by clicking the Add Arrow icon, or select "Add Vertex" from the **Grade** menu. The prompt on the command line says `Point to attach arrow to:`
2. Click **LM** on a vertex of an object. This is where the "tail" of the arrow is. You can only select one vertex at a time, so if you click on a second vertex, the first is unselected.
3. **When you have the correct vertex selected**, click **RM**.
   If the Right mouse Context menu is set On you will get a menu to choose from. Select **Done Selecting**.
   The EDIT ARROW form opens.
4. Enter the arrow grading information, and click the "OK" button to return to the drawing screen.

   If you would rather enter the arrow information manually, instead of having the EDIT ARROW form open automatically, you can change the settings on the "Configure" or "Configure Defaults" form. In that case, the command proceeds as follows:

5. **When you have the correct vertex selected**, click **RM**.
   If the Right mouse Context menu is set On you will get a menu to choose from. Select **Done Selecting**.
   The prompt on the command line says `Select end point for arrow:`
   The end point represents the amount of change from one size to the next. Change to the left or right is called the *dX* value, and change up or down is called the *dY* value.
6. As you move the mouse around, you can see the head of the arrow move with it. You have two options for positioning the head of the arrow:
   - When the arrow is close to where you want it, click **LM** to anchor the arrow. If you're going to use EDIT ARROW to type in the dX and dY values afterward, it doesn't matter where you put the head of the arrow when you first create it.
   - Type in a position for the head of the arrow using the relative coordinate format. This saves you the step of going to EDIT ARROW for each arrow.
7. The grading arrow is created when you finish either of the two options above.

See also:

ADD TACK command
MOVE ARROW command
INTERPOLATE ARROW command

ADD TACK command

Grade -> Add Tack

The ADD TACK command attaches a tack to a vertex of an object. A tack is a grading arrow of zero length, and holds a point in place when you grade an object.

Procedure:

1. Select "Add Tack" from the **Grade** menu. The prompt on the command line says `Point to attach tack to:`
2. Click **LM** on a vertex of an object. You can only select one vertex at a time, so if you click on a second

vertex, the first is unselected.

3. **When you have selected the correct point**, click **RM**.
   If the Right mouse Context menu is set On you will get a menu to choose from. Select **Done Selecting**.
   A tack is added to the selected point.

See also:

ADD ARROW command
EDIT ARROW command
DELETE ARROW command
TOGGLE ARROWS command

COPY ARROW command

Grade -> Copy Arrow

The COPY ARROW command copies an arrow, along with all of its information, from one vertex (point) to another.

Procedure:

1. Select "Copy Arrow" from the **Grade** menu. The prompt on the command line says `Select arrow to copy:`
2. Click **LM** on the vertex (endpoint) of the arrow you want to copy. You can only select one arrow at a time, so if you click on a second arrow, the first is unselected.
3. **When you have selected the correct arrow**, click **RM**, or press the <ESC> key. If the Right mouse Context menu is set On you will get a menu to choose from. Select **Done Selecting**.
   The prompt on the command line says `Select point to add arrow to:`
4. Click **LM** on the vertex you want to copy the arrow to. You can only select one arrow at a time, so if you click on a second arrow, the first is unselected.
5. **When you have selected the correct arrow**, click **RM**. If the Right mouse Context menu is set On you will get a menu to choose from. Select **Done Selecting**.
   The arrow will be copied to the new location. If the destination point already has an arrow, the existing arrow will be replaced by the one you are copying.

See also:

ADD ARROW command
ADD TACK command
EDIT ARROW command
MOVE ARROW command
DELETE ARROW command
INTERPOLATE ARROW command

MOVE ARROW command

Grade -> Move Arrow

The MOVE ARROW command moves a grading arrow from one point to another.

Procedure:

1. Select "Move Arrow" from the **Grade** menu. The prompt on the command line says `Select arrow to move:`

2. Click **LM** on the vertex (endpoint) of the arrow you want to move. You can only select one arrow at a time, so if you click on a second arrow, the first is unselected.
3. **When you have selected the correct arrow**, click **RM**, or press the <ESC> key. If the Right mouse Context menu is set On you will get a menu to choose from. Select **Done Selecting**.
   The prompt on the command line says `Destination for arrow:`
4. Click **LM** on the vertex you want to move the arrow to. You can only select one arrow at a time, so if you click on a second arrow, the first is unselected.
5. **When you have selected the correct arrow**, click **RM**, or press the <ESC> key. If the Right mouse Context menu is set On you will get a menu to choose from. Select **Done Selecting**.
   The arrow will be moved to the new location. If the destination point already has an arrow, the existing arrow will be replaced by the one you are moving.

Note: It is not possible to set coordinates for the destination of the arrow. You can only select an vertex as destination.

See also:

ADD ARROW command
ADD TACK command
EDIT ARROW command
COPY ARROW command
DELETE ARROW command
INTERPOLATE ARROW command

INTERPOLATE ARROW command

Grade -> Interp Arrow

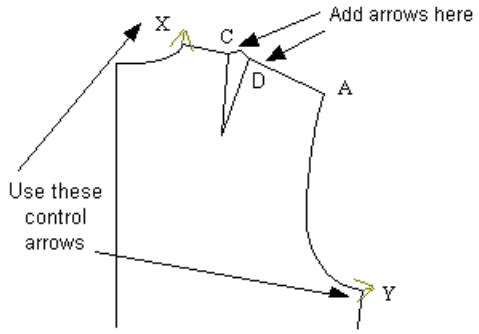
The INTERPOLATE ARROW command adds a grading arrow to a vertex (point), using the grading arrows from two other points as guides. Use this command to make the grading of one object follow the rules established by the grading arrows on a different object, and when copying an arrow would give the wrong result. (Interpolation means "finding an in-between value.")

Procedure:

1. Select "Interp Arrow" from the **Grade** menu. The prompt on the command line says `Point to add interpolated arrow to:`
2. Click **LM** on the point to add an arrow to. You can only select one point at a time, so if you select a second point, the first will be unselected.
3. **When you have selected the correct point**, click **RM**.
   If the Right mouse Context menu is set On you will get a menu to choose from. Select **Done Selecting**.
   The prompt says `First control point:`
4. Click **LM** on the first point whose grading rules you want this new arrow to follow. This point must have an arrow attached to it. You can only select one point at a time, so if you select a second point, the first will be unselected.
5. **When you have selected the first control point**, click **RM**.
   If the Right mouse Context menu is set On you will get a menu to choose from. Select **Done Selecting**.
   The prompt now says `Second control point:`
6. Click **LM** on the second point whose grading rules will guide this new arrow. This point must have an arrow attached to it. Again, you can only select one point at a time.
7. **When you have selected the second control point**, click **RM**.
   If the Right mouse Context menu is set On you will get a menu to choose from. Select **Done Selecting**.
   The interpolated arrow will be created based on the two control points.

The new arrow's dX and dY values are calculated by the same process that is used to grade a point that doesn't have an arrow – it's guided by the two "nearest" arrows.

Example:



When you grade the bodice piece, the movements of shoulder line AX are controlled by the arrows at X and Y. The dart piece needs to be graded so that the new dart touches the new shoulder line. Therefore, points C and D should also be controlled by the arrows at X and Y. Use INTERP ARROW to add arrows to C and D, using X and Y as the control points in each case.

Note:

If you use the CUT *or* JOIN *command on objects that contain arrows, PatternMaker may automatically add arrows to the pieces so they will still grade the same way. This uses exactly the same process as the INTERP ARROW command.*

See also:

ADD ARROW command

EDIT ARROW command

DELETE ARROW command

DELETE ARROW command

The DELETE ARROW command deletes a grading arrow.

Procedure:

1. Select "Delete Arrow" from the **Grade** menu. The prompt on the command line says `Select point (s):`
2. Click **LM** on the endpoint of one or more grading arrows. You can select as many arrows as you want by repetitive clicking.
3. **To stop selecting arrows**, click **RM**.
   If the Right mouse Context menu is set On you will get a menu to choose from. Select **Done Selecting**.
   The arrow(s) you selected will be deleted.

See also:

ADD ARROW command

ADD TACK command

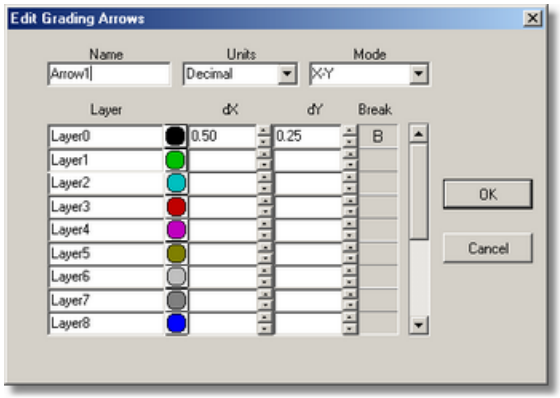
EDIT ARROW command

TOGGLE ARROWS command

EDIT ARROW command

Grade -> Edit Arrow

The EDIT ARROW command is used to set the name, length and/or direction of a grading arrow. You can't usually draw an arrow exactly the right size with the mouse, so unless you are copying arrows from a grading rule that you've already established, you will need to use EDIT ARROW to enter the exact values for a grading arrow.
You will also use EDIT ARROW to give your arrows breaks at different layers.



Procedure:

1. Select "Edit Arrow" from the **Grade** menu. The Edit Arrow dialog box appears. This window displays the name of the currently selected arrow, and its grading information for each layer. The layer name and color cannot be changed with this function, and are shown for your information only (see the LAYER command).
2. ***Name:***
   The default name of an arrow is "Arrow" or "Tack." Rename the arrow to something more descriptive – for example, "Collar, Center Front" or P1, P2 – by typing in this field.
   The name should at least consist **one letter**, so you can not use only numbers!
   The name should describe the position of the arrow in the garment to be graded. The name will be saved in the grading table.
3. ***Units:***
   Click on the Units drop-down box to choose the units for editing your arrow. When you change the Units, the numbers in the table below change accordingly. If you are working in metric units, you have a choice of centimeters or millimeters. If you are working in inches, you can choose Decimal (ordinary numbers with a decimal point) or various fractions of an inch. For instance, if you choose 1/16", all the values for the arrow are rounded to the nearest 1/16 th inch.

   Tip: If you are using one of the fractional units, you can enter numbers in fraction form. For example, you can enter "3/8" in the dX field. To enter numbers larger than 1", use improper fractions – for example, enter 1-1/8 as 9/8.

   Note: Remember that when you change the Units, the value of the arrow hasn't changed; you are just seeing the same information displayed in a different way.

   Note: To switch between inches and metric units, see the UNITS command. This is different than the "Units" discussed here, and must be selected before beginning EDIT ARROW.

4. ***Mode:***
   Select one of four modes for displaying the values for an arrow:

X/Y : dX and dY values are shown for each layer

Polar : values are shown as distance and angle

Relative : the total dX and dY values are shown relative to a highlighted layer

Scaled : incremental dX and dY values are shown, beginning with a highlighted layer

Keep in mind that whichever mode you select, the length and direction of an arrow remain the same. The only thing that changes is the way the information is shown to you.

5. ***The Arrow Information:***
   You will have to name the layer through the Edit layer command <F11>. When you have named the layers the names will be shown here also.
   For each layer there are three input fields:
   dX : The length of the arrow in the X (horizontal) direction. A positive X value means the arrow goes to the right, and a negative X value means the arrow goes to the left. If the dX is empty, it means there is no grading break for this size, and the arrow uses the same dX values as for the previous layer.
   dY : The length of the arrow in the Y (vertical) direction. A positive Y value means the arrow goes up, and a negative Y value means the arrow goes down. If the dY is empty, it means there is no grading break for this size, and the arrow uses the same dY values as for the previous layer.
   Break : If this box is checked, there is a grading break at this layer (size). A grading break means that this point grades differently for sizes larger than this, and that a different dX and dY are used than for previous sizes. If the box is not checked, then there is no grading break, no numbers are shown for this size, and the arrow uses the same values as for the previous size.
6. Change the values for the dX and dY by either typing a number in the box, or by clicking the small up and down arrows at the right of each box to increase or decrease them by the amount selected under "Units."
7. Set or clear a breakpoint for a layer by clicking in the corresponding "Break" box. (Or, if you enter values in the blank dX and dY areas, the layer will automatically become a break point.) A "B" appears in the box if that layer is a break point. To remove a break point, click on the break point box with a "B" in it and the "B" will disappear. Then the dX and dY values will follow the last previous break point.
8. When you have set all the break points you need and given them the correct values (don't forget to use the scroll bar to check all layers), you are done editing this arrow. Click the "OK" button to exit the dialog box.

See also:

Using Breakpoints
Arrow Display Modes
ADD ARROW command
TOGGLE ARROWS command
GRADE command
LayerNames

7.3 Marker Overview

If you are using PatternMaker in a manufacturing environment, a marker is the end result of your work. A marker is a paper printout with all of the outlines of the pieces, ready to be laid over the fabric and cut. PatternMaker's marker functions let you arrange the pieces in the marker area, make sure the pieces touch but don't overlap, set the number of items of each size (the cut ratio), tell you the rate of material usage and other information, and print out the marker.

Most of the Marker commands are located on the **Marker** menu. Two commands, PRINT MARKER and PRINT MARKER REPORT are found on the **File** menu.

Steps for creating a marker

Follow these steps to create a marker:

- Lay out your pattern.
- Define the marker pieces.
- Group pieces with other objects.
- Change the view to Marker Mode.
- Grade the pattern.
- Set the cut ratio.
- Multiply pieces by the Cut Ratio.
- Arrange the pieces in the Marker Area.
- Print the marker, and a marker report.

Note: See Tutorial 12 for practice in laying out a marker.

Laying out the pattern

First, make up your pattern for one garment, using the techniques and tools described in this manual.

Then, use the DEFINE PIECE command to tell the computer which objects in the drawing will be marker pieces.

Defining marker pieces

A marker is made up of the outlines of the actual pieces to be cut out of the material. When you arrange the pieces on the marker, it is these objects that you need to arrange. Other items in the pattern – grain lines, text, and so on – don't affect the arrangement. Therefore, you need to tell PatternMaker which objects to treat as marker pieces.

Use the DEFINE PIECE command to turn an ordinary object in your drawing into a marker piece. Use the UNDO PIECE command to turn a piece back into an ordinary object. These commands are described in more detail in the next chapter.

A marker piece is still a PatternMaker object. You can still do all the usual things with it: cut it, move it, erase it, and so forth. But PatternMaker's marker pieces are special in a few ways:

- The ARRANGE, PACK and CUT RATIO commands only work with marker pieces.
- When the screen view is in Marker Mode, all objects are hidden except those defined as marker pieces.
- PatternMaker's marker reports tell you things about your pieces, such as how many there are and how much material they use.

Grouping objects with marker pieces

As mentioned above, many of PatternMaker's marking features don't apply to objects that are not marker pieces. But what if your pattern pieces consist of more than one object? When you arrange your marker pieces, you don't want to move them away from their grain lines, piece labels, and notch marks.

To keep objects together when you arrange them, use the GROUP command to group them together. For instance, for a sleeve, the marker piece will be the outline of the sleeve, and other objects in the group might be the grain line, the text identifying the piece, etc.

Now, when you select the piece to arrange, the other items grouped with it will also be selected and they will move along with it. PatternMaker makes sure that pieces don't overlap other pieces when you arrange them, but it doesn't care if the objects grouped with a piece overlap.

Note: You can't group a marker piece with another marker piece.

See also:

GROUP command

UNGROUP command

Marker mode

PatternMaker has two modes for showing your drawing on the screen. *Marker Mode* is used when arranging markers. *Draw Mode* is used for everything else. An area at the far left of the black Status Bar tells you which mode you are in. Change modes by clicking the mouse on this area.

When you switch to Marker Mode, two things happen. First, all objects in your drawing disappear except for the marker pieces. This makes it easier to see what you are doing when you arrange the pieces. Second, a different set of icons appears in the icon area. These icons represent various Marker commands. All the usual commands are still available from the pull-down menus, however.

Now that your marker pieces are defined, and grouped with the other objects that go with them, set the display to Marker Mode by clicking the mouse on the "Mode" area of the menu bar. If any of your pattern pieces disappear when you change to Marker Mode, it means you haven't defined them as marker pieces yet. Go back to Draw Mode and define the pieces.

Grading your pattern

Now it is time to grade your pattern. Grading is covered in Grading Overview. You may have already attached the grading arrows to your pattern, or you may do it now.

Note: You may need to attach grading arrows to some of the objects that are grouped with the marker pieces. If you grade an object that contains no grading arrows, PatternMaker will make exact duplicates of the object in the same place. At first, it will look like there are no new objects because they are drawn right on top of each other. This is fine.

Warning: Don't clutter up your pattern with graded copies of items you don't need for your marker – if you don't want to grade an object, don't group it with the marker piece. Usually, the only objects you need in a marker are the pieces themselves and perhaps grain lines and punch marks.

The GRADE and CUT RATIO commands make multiple copies of each object you select, and the effects are cumulative. If you are careless about how many items you include in a large marker, it's possible to create hundreds of unnecessary objects. This will slow down the program, make your save files very large, and may take up so much memory that the program stops.

Note: To protect yourself against losing all your work, use SAVE AS to save a marker in a different file than the original pattern it was made from. That way, you can't lose the original pattern.

Note on Stripe/Plaid Arrangements: If you need to set plaid points for some of your pieces, do it before you grade them. Then all of the graded pieces will also include the plaid points.

Setting the Cut Ratio

A cut ratio represents the relative numbers of different sizes of a garment that you want to make. With PatternMaker, each size has a cut ratio that tells PatternMaker how many items of that size will go into a single marker. For instance, a marker may contain enough pieces to make 2 size Small, 3 size Medium, 3 size Large, and 2 size X-Large.

PatternMaker's CUT RATIO command makes enough copies of the selected pieces to match the cut ratio for each object's size. It also spreads them apart so you can see them all.

Note: A piece's cut ratio is determined by the layer it is on. Therefore, you should make sure all of the pieces for a given size are on the same layer at this point. Normally, the GRADE command takes care of this by placing each new size on a different layer.

Use the LAYER command to set the cut ratio for each layer. You only need to set cut ratios for those layers that

represent sizes you will be using.

Note: While you are looking at the layer display, make sure that each layer has a name that tells you what size is on that layer, i.e. "Small" or "Size10." This will save much confusion later on.

Next, select the CUT RATIO command. PatternMaker will make copies of each marker piece that you select, according to each size's cut ratio. Normally, you will select all of the pieces in the drawing for Cut Ratio.

Example: If a piece is on layer "Large," and the cut ratio for "Large" is 3, then 2 copies will be made for a total of 3.

The CUT RATIO command assigns a bundle number to each piece it creates. When you print your marker, each piece is labeled with its size and bundle number. When you put all the pieces with the same size and bundle number together, you will have a bundle containing enough pieces to make one garment.

The marker area

The marker area is the area of your drawing where the marker goes. When you select "Print Marker," this is the area that is printed out.

The marker area is shown by a gray-and-red rectangle. The right edge of the marker area extends off the edge of the screen. This represents the long bolt of fabric coming off of the roll. When you put some marker pieces into the marker area, a vertical green bar will show how long the actual marker is. Use the TOGGLE MARKER AREA or SET MARKER AREA commands to show the marker area on screen.

The vertical height of the marker area is equal to the width of your fabric. Set this width with the Set Marker Area command.

Arranging the marker

Now you are ready to arrange the pieces on the marker. After you have graded your pattern and multiplied by the cut ratio, you will have quite a number of pieces in your drawing. Your task now is to arrange all these pieces in the most efficient way.

Use the ARRANGE MARKER command to place the pieces, one at a time, in the marker area. You can rotate them in 45 degree increments as you place them. Pack them together to use material efficiently. PatternMaker will make sure they touch without overlapping or going out of the marker area. Use the PACK commands to move pieces into tight spaces.

If you are arranging your marker for a striped or plaid fabric, you will have some pieces that need to be arranged so that the stripe or plaid lines match, rather than packing them together as close as possible. Set plaid points for these pieces before using the ARRANGE command. This is described in detail later.

ARRANGE is like the MOVE command, with some special features. ARRANGE only allows you to move marker pieces, and it makes sure the pieces you move don't overlap. Since you can't select non-piece (non-marker-piece) objects for ARRANGE, you should group non-piece objects with a marker piece if you want to keep them together.

Here is the order of events for the ARRANGE command:

1. Select "Arrange" from the **Marker** menu. The prompt on the command line says `Select marker piece to pack:`
2. Click **LM** on the piece you want to move. You can only select one piece at a time. If you select a second piece, the first is unselected.
3. **When you have selected the correct piece**, press <ESC> or click **RM**.
4. Click **LM** to indicate the base point and destination point for the move, just as with the ordinary MOVE command. Before selecting these points, you can rotate the piece to make it fit better (see below).
5. After you move the piece, PatternMaker will check to see if the piece overlaps another piece or the edge of the marker area. If it does, it will "bounce back" in the direction it came from until the two pieces just touch.

6. Then, use the Left Arrow, Up Arrow, or Down Arrow icons, or the <L>, <U> and <D> keys on your keyboard, to pack the piece tighter. You can do this as many times as you like.
7. **When you are done arranging and packing a piece**, press <ESC> or click **RM** to finish the ARRANGE command for that piece.

> *Hint: The* ARRANGE *command uses a more complicated sequence of mouse inputs than other PatternMaker functions. It is also the most important of the marking functions. Practice using it until you can arrange pieces quickly, one after the other. Remember, when you are done with one piece you can repeat the* ARRANGE *command by simply clicking on another piece.*

> *Hint: Use the "bounce back" feature to your advantage. To push one piece up against another, just move it until it overlaps the second piece a little, and PatternMaker will make sure it just touches. You decide the direction to move it, and PatternMaker determines the distance. If a piece keeps bouncing back to its original position, this means PatternMaker can't find a place for it without overlap. Move the piece into a clear space where it doesn't overlap anything, then move it from there into its final position.*

> *Hint: Sometimes you will want to fit a piece in a tight space by letting the seam allowances overlap just a little bit. In this case, use the* MOVE *command instead of* ARRANGE. *The* MOVE *command allows pieces to overlap. You can select* MOVE *from the* **Edit** *menu even though the* MOVE *icon disappears when you're in Marker Mode.*

If you need to rotate a piece to fit it into the marker, use the rotate icons, or the <X> (left) or <C> (right) keys on your keyboard, while moving the piece. This will rotate the object right or left in 45 degree increments. There are also icons you can use to rotate the piece in 1 degree increments. Which rotations are acceptable depends on the grain of the material.

After you arrange each piece, a message on the prompt line will tell you what percentage of the material your marker uses. This percentage is just the area of the marker, divided by the areas of all the pieces in the marker area. If a piece lies partly in, partly out of the marker area, PatternMaker won't calculate the percentage.

Packing

After arranging each piece, you can push it further up, left, or down to pack it in tighter. PatternMaker will prompt you to pack each piece after you have placed it. Use the UP ARROW, LEFT ARROW, or DOWN ARROW icons to push the selected piece in the indicated direction. PatternMaker will move the piece in that direction until it touches another piece or the edge of the marker area. The PACK commands can also be selected separately.

Working with stripes and plaids

If you are using a striped or plaid (or print) pattern, you will need to arrange certain pieces so that the stripes line up with each other. For instance, a pocket on a striped shirt should be cut so its stripes match those on the shirt front. This means that when you arrange the marker, you can't just pack the pocket in next to the other pieces. Instead, it needs to be spaced apart by an amount based on the distance between stripes. With a plaid fabric, you need to have the proper spacing in both the horizontal and the vertical. The PLAID ARRANGE command lets you place pieces with stripe or plaid spacing.

Using PLAID ARRANGE is much like using the MOVE command with Snap to Grid turned on, with some special features added. This may help you visualize the following procedure.

Stripe/plaid spacing

Use the SET MARKER AREA command to set the spacing for Stripe/Plaid repeats. When you run this command, you will see a dialog box with several numbers relating to the stripe/plaid spacing. The "Vert. Stripe" value is the spacing between vertical stripes. The "Horiz. Stripe" value is the spacing between horizontal stripes. Remember that this is not the distance between individual stripes, but the distance between repeats of the entire pattern.

If your fabric has vertical stripes (vertical as seen on the computer screen), set the value for the Vert. Stripe spacing and set the Horiz. Stripe spacing to zero. For horizontal stripes, set the Horiz. Stripe value, and put the Vert. Stripe value to zero. For a plaid repeat, set both values.

Stripe/plaid origin

In the Set Marker Area dialog box you will also see spaces for "Horiz. Base" and "Vert. Base." These numbers represent the location of the beginning of the stripe or plaid pattern. For instance, if your plaid repeats need to start 1 inch from the left edge of the marker, and 3 inches from the bottom, you would set these numbers to 1.00 and 3.00.

Note: For some users, the origin of the pattern doesn't matter because you don't care where on the pieces the stripes are, as long as they line up. In this case, you can ignore these numbers.

Setting the plaid points

Before you can place a piece on a stripe or plaid line, you need to give the piece a plaid point. This is the reference point that actually ends up on the stripe or plaid line when you place the piece. For instance, if you have a pocket and a shirt front that need to be lined up, you are probably accustomed to using punch marks to indicate how they line up. Put the plaid points exactly where the two punch marks go. These two points will line up with the pattern of the material when you place the pieces on the plaid of the material.

To add a plaid point to an object, use the ADD PLAID POINT command. An object can have more than one plaid point, but only one is used at a time. If an object has more than one plaid point, you can change the active point with the Active Plaid Point command.

A plaid point is shown as a small yellow "+" sign. An inactive plaid point is red instead of yellow.

Stripe/plaid arrange

To arrange a piece on a stripe or plaid line, use the PLAID ARRANGE command. Select a marker piece. Notice that you don't have to select a "base point" for this move. The plaid point is the base point of the move. Select a destination for the piece. PatternMaker will "snap" this destination to a point with the stripe and/or plaid spacing that you set with SET MARKER AREA. This overrides any snap mode you may have turned on.

Unlike ARRANGE, the PLAID ARRANGE command does not check whether the piece you arrange overlaps other pieces. It simply makes sure the piece obeys the stripe/plaid spacing you have set.

Marker Reports

When you have arranged your marker, use the MARKER REPORT to get statistics and other information about your marker. A box appears containing the following information:

- Date and time
- Style name
- File name
- Length and width of marker
- Number of pieces (both total and number placed within marker)

- Efficiency (material yield in percent)
- Material required (yards per bundle)
- Cut ratios for each size
- Fabric name
- Notes
- Warning if number of pieces doesn't match cut ratio

When the report appears, you can print it, if you want, by clicking the Print button. You can also send the report directly to the printer with the PRINT REPORT command in the **File** menu.

> *Note: If your computer is connected to a large plotter, you will probably prefer to print the marker report on a desktop printer, if available. Use PRINT SETUP to choose a different printer for the report.*

There are two main uses for the marker report. One is to estimate costs by seeing how much material your marker will use. The other is to make sure the marker is complete. If a mistake has been made and the marker doesn't contain the right number of pieces, the marker report will help you catch it before the marker goes to the cutting room.

First, look at the number of pieces placed, to make sure all the pieces are actually in the marker. Second, look for a note at the bottom of the report, saying "Piece/bundle count does not match cut ratio." If this note appears, then either the number of pieces for each bundle doesn't match, or the number of bundles in the various sizes doesn't match the cut ratio.

7.4 Marker Menu Commands

The **Marker** menu includes all the commands related to creating a marker, from defining pieces to arranging to printing.

ARRANGE MARKER command

The ARRANGE command arranges pieces in the marker area. ARRANGE is very similar to the MOVE command, but it packs the pieces together to get the most efficient material usage, while also making sure pieces do not overlap each other or the edge of the marker area.

Preparation:

1. Before arranging a marker, use DEFINE PIECE to identify the marker pieces.
2. Use GRADE and CUT RATIO to make multiple sizes and extra bundles, if desired.
3. Switch to MARKER MODE to hide non-marker objects and make the ARRANGE icon visible. Use SET MARKER AREA to change the settings for the marker area and make it visible.

Procedure:

1. Select "Arrange Marker" from the **Marker** menu. The prompt on the command line says `Select a piece:`
2. Click **LM** on a single marker piece. You can only select one piece at a time, and you cannot select objects that are not marker pieces.
3. **When you have selected the piece you want**, click **RM**, or press the <ESC> key.
4. Click again inside the selected piece to indicate the "base point" (see the MOVE command for details).
5. As you move the mouse around, the marker piece follows. While moving the piece, you can rotate it in 45 degree increments with the Rotate Left and Rotate Right icons, or by using the <R> and/or <L> keys.
6. If the piece you are placing has an active plaid point, the plaid point will snap to the nearest location that

matches the plaid/stripe repeat. This overrides any Snap mode you may have active.

7. When you have the piece where you want it, click **LM** to place the piece into the Marker Area. If the piece overlaps another piece at its destination, it will "bounce back" toward its original position.
8. Another prompt will appear, asking you to select a PACK function (PACK UP, PACK DOWN, or PACK LEFT). Type "U", "D", or "X", or use the Pack icons, to pack the piece.
9. You may pack the selected piece as many times as you like. When you are done placing the piece, click **LM** in the drawing area to repeat the command with a new piece. Click **RM** to exit the ARRANGE command.

When you are finished with the command, a message will appear on the prompt line telling you how efficient your use of material is.

See also:

DEFINE PIECE command
MARKER MODE command
SET MARKER AREA command

DEFINE MARKER PIECE command

The DEFINE PIECE command tells PatternMaker that an object should be considered as a Marker Piece ("a Piece") for purposes of laying out markers. You must do this with an object before you can use the ARRANGE command on it.

If you copy or grade a marker piece, the new objects will also be marker pieces.

Often you will group other objects with a marker piece (see GROUP). However, only one object in the group can be a Marker piece.

Procedure:

1. Select "Define Piece" from the **Marker** menu. The prompt on the command line says `Select object to be marker piece:`
2. Click **LM** on the object you want. Only polygon objects (not text, dimensions, or symbol insertions) can be marker pieces. You can only select one object at a time, so if you click on a second object, the first one is unselected.
3. **When you have selected the piece you want**, click **RM**, or press the <ESC> key.
4. Repeat for each object that you want to define as a Marker Piece. To see which objects are marker pieces, switch to Marker Mode.

Only marker pieces can be placed with the ARRANGE command, copied with the CUT RATIO command, or counted by the MARKER REPORT command. Also, only Marker Pieces are shown when the screen is in Marker Mode. Otherwise, a marker piece is treated like any other object.

See also:

UNDO MARKER PIECE command
ARRANGE command
CUT RATIO command
MARKER REPORT command
MARKER MODE command

UNDO MARKER PIECE command

The UNDO MARKER PIECE command converts a marker piece back to an ordinary drawing object.

Procedure:

1. Select "Undo Piece" from the **Marker** menu. The prompt on the command line says `Select marker piece(s):`
2. Click **LM** on the pieces you want to convert. You can select as many pieces as you want by repetitive clicking.
3. **To stop selecting pieces**, click **RM**, or press the <ESC> key. The pieces are converted back to ordinary polygon objects.

If you are in Marker Mode when you perform this command, the pieces you convert will disappear from the screen, since only Marker Pieces are visible in this mode. The piece(s) you converted will still be visible in Draw Mode.

CUT RATIO command

The CUT RATIO command makes copies of the selected marker pieces. The number of copies for each piece is determined by the cut ratio of the layer on which that piece is drawn. For example, if the cut ratio for a certain layer is "4", then three copies of each selected piece are created, for a total of four.

Procedure:

1. If you have not already done so, set the cut ratio for each layer in the Layers window (see LAYER).
2. Select "Cut Ratio" from the **Marker** menu.
3. Click **LM** on one or more marker pieces. Normally, you should use the "All" icon to select every piece in your pattern. This ensures that the total count of pieces is correct.
4. **To stop selecting pieces**, click **RM**, or press the <ESC> key. You will then be asked if you want to pre-place the pieces. If you answer "Yes," PatternMaker will place the pieces above the marker area. If you answer "No," PatternMaker will leave the original objects where they are and place the copies to the right of the originals.

Cut Ratio also assigns a bundle number to each piece it creates. A bundle is a set of pieces that go together to make a single garment. By putting all the pieces with the same size and bundle number together, you ensure that you have the right pieces when it is time to sew them together.

See also:

MARKER AREA command

ARRANGE MARKER command

LAYER command

PACK commands

The PACK commands are used to move a marker piece, like the ARRANGE command does, but in a specific direction. This is sometimes an easier way to pack pieces more tightly in the marker area. The PACK commands can be activated as individual commands, but they also appear as an option under the ARRANGE command.

Procedure:

1. Activate the PACK commands either from the Pack icons or by selecting the command from the **Marker** menu. Select one of the following:

PACK LEFT Used to pack a marker piece more tightly in the marker area. The selected piece is moved left until it touches either the left edge of the marker area or another piece.

PACK UP Used to pack a marker piece more tightly in the marker area. The selected piece is moved up until it touches either the upper edge of the marker area or another piece.

PACK DOWN Used to pack a marker piece more tightly in the marker area. The selected piece is moved down until it touches either the lower edge of the marker area or another piece.

2. Click **LM** on the marker piece(s) you want to pack. You can only select one piece at a time, so if you click on a second piece, the first is unselected.
3. **When you have selected the piece you want**, click **RM**, or press the <ESC> key. The piece will be moved as far as possible in the direction you selected.

MARKER REPORT command

The MARKER REPORT displays information about the marker. Listed are:

- Date and time
- Style name
- File name
- Length and width of marker
- Number of pieces (both total and number placed within marker)
- Efficiency (material yield in percent)
- Material required (yards per bundle)
- Cut ratios and layer names for each size
- Fabric name
- Notes
- Warning if pieces don't match cut ratio. This message appears if the bundles don't all have the same number of pieces, or if the number of bundles on a layer doesn't match that layer's cut ratio.

You can print the report by clicking the "Print" button that appears, or by selecting "Print Marker Report" from the **File** menu.

Use MARKER SETTINGS to enter the style name, fabric name and up to three notes.

See also:

PRINT MARKER REPORT command

MARKER SETTINGS command

PRINT MARKER command

MARKER SETTINGS command

Use MARKER SETTINGS to enter notes and information about your marker. This information is displayed in the marker report.

Procedure:

1. Select "Marker Settings" from the **Marker** menu. The Marker Settings dialog box opens.
2. Enter the material, style name, and up to three notes of your own choice.
3. When finished, click the "OK" button to return to the drawing screen.

See also:

MARKER REPORT command

PRINT MARKER REPORT command

SET MARKER AREA command

SET MARKER AREA defines the width of the marker area and sets the spacing values for stripe and plaid arrangements.

Procedure:

Select "Set Marker Area" from the **Marker** menu. A dialog box appears with five fields. To change a setting, highlight the number and type in a new value. The settings are:

Width The width (vertical size) of the marker in inches. This is equal to the usable width of your fabric. The length of the marker is automatically determined by the pieces within it.

Vert. stripe The spacing between vertical stripes on your fabric. (A vertical stripe is one that is vertical as seen on your computer screen.) Enter the distance between pattern repeats, not the distance between individual stripes. If your fabric has horizontal stripes only, set this to zero.

Horiz. stripe The spacing between horizontal stripes on your fabric. If your fabric has vertical stripes only, set this to zero.

Vert. base The distance from the lower edge of the marker to the beginning of your fabric's pattern. This is the point where the horizontal stripe/plaid repeats will be measured from.

Horiz. base The distance from the left edge of the marker to the beginning of your fabric's pattern. This is the point where the vertical stripe/plaid repeats will be measured from.

See Working with stripes and plaids for a discussion of the use of Vertical/Horizonal stripe and base. If you aren't using a striped or plaid fabric, you can ignore all of the numbers except the marker width.

The marker area is shown by a gray and red outline. If the marker area was turned off before, it will be turned on. The end of the marker area extends off the right side of the screen. A green bar shows the current length of the marker area, as determined by the marker pieces in the marker. This is updated whenever you place a marker piece or run a marker report.

See also:

MARKER AREA command
ARRANGE command
PLAID ARRANGE command
MARKER REPORT command

MARKER MODE command

MARKER MODE toggles the screen display between draw mode and marker mode. Draw mode is the normal mode. Marker Mode is used when arranging and printing markers. The mode area at the left end of the status bar on your screen tells you which mode you are in.

Marker mode makes it easier to see what you are doing when arranging a marker, since all objects except marker pieces are hidden. Also, the usual command icons are replaced with icons for the marker commands. However, all functions are still available through the pull-down menus.

Procedure:

- Enter Marker Mode either by selecting "Marker Mode" from the **Marker** menu, or by clicking the mouse on the "mode" area in the status bar.

See also:

DEFINE MARKER PIECE command
SET MARKER AREA command

7.5 Digitizing Tablets

Working with a digitizer

A digitizing tablet, or digitizer, is an electronic tablet with its own mouse or other pointing device. It is used in place of an ordinary mouse.
A digitizing tablet is like a drawing tablet with its own mouse.The tablet senses where the mouse is electronically. This makes it much more accurate than an ordinary mouse. It also means that the digitizer mouse won't work unless it's on the digitizer tablet.
A digitizer is very helpful in drawing with PatternMaker because you can use it to "trace" patterns from paper, which you can't do with an ordinary mouse. A digitizer is not required to use PatternMaker, but you can't trace patterns from paper without one.

> ***The digitizer commands and WINTAB digitizer interface are not available in PatternMaker Professional Studio. Your digitizer will still work as a mouse, but the scaling may not be correct.***

The pointing device you use with your digitizer may be a mouse, puck, or pen, depending on the digitizer. PatternMaker is designed to work best with a 16 button digitizer mouse. If you have less buttons you can not use all the necessary functions you need when digitizing a drawing. At least you have to be able to add 5 different functions to the mouse when digitizing. Therefore we do not recommend a pen or 4 buttons mouse.

Most popular digitizers are supported through the WINTAB Windows digitizer interface. Your digitizer supplier should have instructions on how to set your digitizer to work with Windows. PatternMaker works with any digitizing tablet that comes with a WINTAB driver, which must be installed on your computer before the digitizer will work. Follow the installation directions that come with the digitizer.

If you expect to be digitizing many patterns from full-size originals, we strongly recommend you buy the biggest digitizer you can – it will be well worth the investment. The largest are about the size of a kitchen table, big enough to spread a pattern out.

See also:

CONFIGURE DIGITIZER command
DRAW ALIGN command

Note: We have not been able to get a digitizer from the brand Wacom to get working with PatternMaker.

Installation

Your digitizer should come with a stylus/mouse connection and two cables: one to connect the tablet to your computer (I/O cable), and one power cord. Depending on your digitizer model, the power cord may plug directly into the digitizer, or it may plug into the "plug" on the end of the serial cable which then plugs into a serial port on the back of your computer. If in doubt, follow the directions in the digitizer's instruction manual.

First connect the stylus/mouse to the digitizer and then the separate power cord if you have one. Next, connect the I/O cable, the connection cable between your tablet and computer. The digitizer will emit the four Success tones when you connect the external power supply. There is no specific order for disconnecting the components.

Your digitizer should also come supplied with a diskette with driver programs for the digitizer. PatternMaker works with any digitizing tablet that comes with a WinTab driver, which must be installed on your computer before the digitizer will work. Follow the installation directions that come with the digitizer.
Download when necessary the latest driver from the website of your digitizer supplier.

When you are installing the driver you you can set the mouse you are working with (we recommend a 16 button mouse), the mouse mode (absolute mouse mode) and left click for the left mouse button.

After installing the digitizer driver the digitizer settings must be set right for working with PatternMaker.
PatternMaker uses the default settings of the digitizer. When you have bought a used digitizer the settings could

have been changed for another program. When PatternMaker does not recognize the digitizer check if the default settings are on.

Verifying that your digitizer is working

At the far right of the Status Bar is an icon which looks like either an arrow cursor or a plus sign. This indicates which mode the digitizer is in. If this icon doesn't appear when you start PatternMaker, it means that the computer doesn't know the WinTab driver is installed. Recheck the configuration and reboot your computer, if necessary.

You will notice that when the digitizer is connected to the computer, your ordinary mouse will act strange. You an not control it. Connecting the puck is influencing the ordinary mouse. Therefore working together with mouse and puck is not easy.

When you open PatternMaker in the Status bar at the left a field appears with Mouse or Digitizer in it. Here you can set what you want to do: working with the puck (digitizing) or drawing with the ordinary mouse.

Digitizer modes

The digitizer can operate in two modes: mouse mode and absolute mode (or digitize mode).

- If you see the arrow cursor on the screen, you are in **mouse mode**. In mouse mode, the digitizer mouse (puck) works exactly like an ordinary mouse. The digitizer tells the program where the mouse cursor is, measured in pixels (screen dots) from the lower left corner of the screen. This is much less accurate than absolute (digitizer) mode, because 100 pixels is always 100 pixels, regardless of whether your screen view is showing an entire sleeve, or just a close-up of a buttonhole.
  In mouse mode you can use the digitizer puck to select menus and icons.
- If your cursor is a small plus sign, you are in **absolute (digitizer) mode**. Absolute mode means that a point on the digitizer always corresponds to the same coordinates, no matter what's showing on the screen. The absolute mode shows in PatternMaker the position (the number) of the puck. This number is measured from the left bottom corner of the tablet.
  For example, you can zoom out so far that your whole pattern is a tiny dot in the center of the screen, but if you move the puck ten inches, the coordinates will change by ten inches.
  Depending where the puck is, you may or not be able to see the cursor. If you can't see the cursor, zoom out (press the <PAGE DOWN> key) until you can see it.

  In absolute mode you can trace objects very accurately, but you cannot use the menus or icons. To run commands you need to use the keyboard or switch to mouse mode.
  When the digitizer is connected to your computer at the right side of the Status bar you can see whether you are in mouse mode (arrow) or digitizer -absolute- mode (plus sign).

Numbering of buttons

When your digitizer is in mouse mode, certain buttons on the pointing device are equivalent to mouse buttons – refer to your digitizer documentation if you have trouble. When your digitizer is in absolute mode, the following numbered buttons have the following functions:

Button 0 - same as left mouse button

Button 1 - Toggle Digitizer Mode

Button 2 - Pan to Cursor Location (use this if the cursor goes out of sight)

Button 3 - same as right mouse button

This is the default configuration. To digitize a drawing it is necessary to change these button assignments with the CONFIGURE digitizer command.

PatternMaker is designed to work best with a 16 button digitizer mouse. If you have less buttons you can not use all

the necessary functions you need when digitizing a drawing. At least you have to be able to add 5 different functions to the mouse when digitizing. Therefore we do not recommend a pen or 4 buttons mouse.

We recommend to have the following functions assigned to a button:

Digitizer Button	Active	Command on the left
Button 0	Mouse	Left Mouse
Button 1	Function	Poly
Button 2	Poly	Done
Button 3	Poly	Open
Button 4	Poly	Curve X
Button 5	Poly	Curve through point
Button 6	Poly	Curve automatic
Button 7	Poly	Line

The order and which functions you want to assign to the buttons you can set yourself easily. Working with the digitizer will give you knowledge which functions you miss or want to use .

See also:

CONFIGURE DIGITIZER command

Digitizer scale and origin

By default, one inch on the digitizer tablet is one inch in your drawing. Also by default, the lower left corner of the digitizer corresponds to the coordinates (0,0) in your drawing. You can change these values with the DRAW ALIGN, SET ORIGIN, and CONFIGURE digitizer commands below.

The ***origin*** is the coordinate position of the point on the digitizer surface which equals point (0,0) in your drawing on your screen. Normally this will be the lower left corner of the digitizer tablet.
For instance, if you enter X=5 and Y=5, then the point 5 inches right and 5 inches up from the lower left corner of the digitizer surface is the origin.
You set the origin of the mouse on screen and of the digitizer in Set origin in the **Settings menu/Digitzer**.
When you have to digitize your drawing in more than one time (because your drawing is bigger than your tablet) then setting the origin again is important. In this way you can connect the separate drawings precisely to each other.

The ***scale*** is the number of drawing inches per digitizer inch.
If you enter 2, then one inch on the digitizer tablet equals 2 inches in the drawing. If you enter 0.5, then one inch on the digitizer equals ½ inch in the drawing.
You set the scale in the Configure digitizer form

See:

CONFIGURE DIGITIZER command

SET ORIGIN command

DRAW ALIGN command

Digitizer Functions

> *The digitizer commands and WINTAB digitizer interface are not available in PatternMaker Professional Studio. Your digitizer will still work as a mouse, but the scaling may not be correct.*

The following functions are found under the **Settings** menu, in the Digitizer submenu:

DRAW ALIGN

Lets you change the digitizer scale and origin with graphical inputs. The length and orientation of a line on the digitizer is set to match a line on the screen.

TOGGLE MODE

Switches the digitizer between absolute mode and mouse mode. You will use this command frequently when you are tracing patterns into the computer, because you need absolute mode to trace, and mouse mode to select commands and options.

SET ORIGIN

Use this command when you start digitizing to set the base point of your digitizer mouse on your screen.
To set the origin, first enter a point in your drawing on screen. Then enter the point on the digitizer that corresponds to the screen point.

You can also use this when you are digitizing something that is too big to digitize all at once and you want the digitizer to cover a different location in your drawing. You set the origins of the drawing on the screen and the base point on the digitizer again.
This function does not change the scale.

CONFIGURE Digitizer

Allows you to assign any PatternMaker command or shortcut to the buttons on your digitizer.

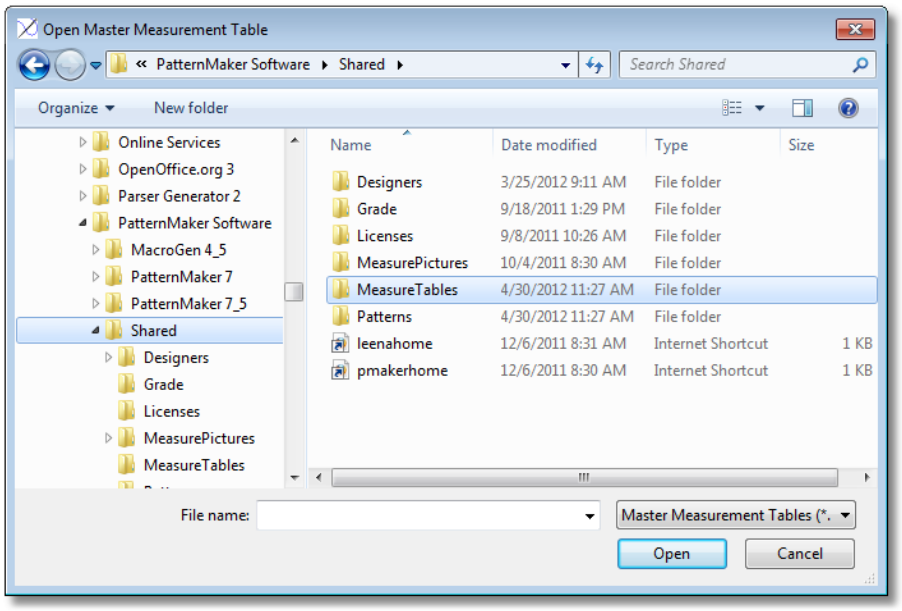
This command also lets you set the digitizer scale and rotation, but with typed inputs (as opposed to DRAW ALIGN, above).

Appendix: Using Windows dialogs instead of LaunchPad

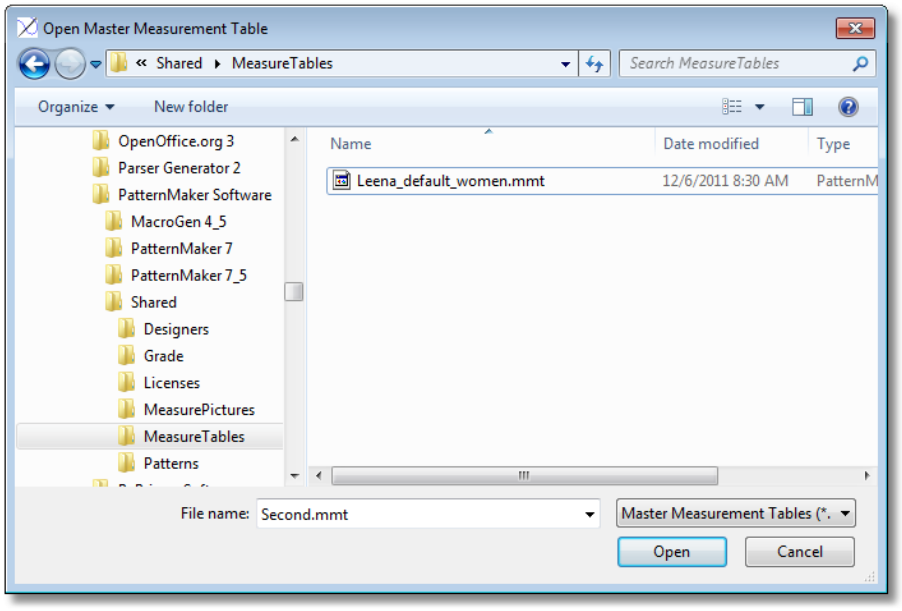
If you choose not to use the LaunchPad interface, the File/Open, File/Save, and File/Run Macro procedures will look very different from what is pictured in the main sections of this documentation.

8.1 Create a personal measurement table

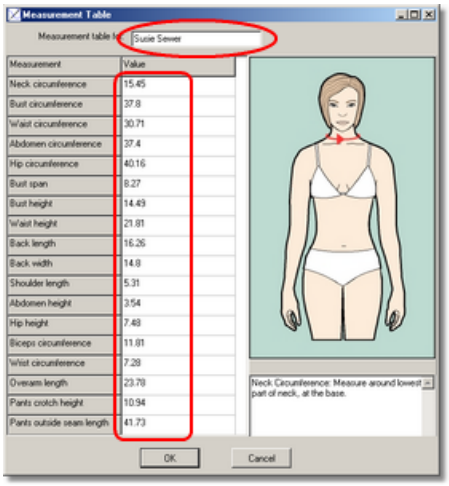
- Have someone help you take your measurements
- Open PatternMaker
- Select "Create Measurement Table" from the **Settings** menu
- Navigate to *C:/Program Files/PatternMaker Software/Shared/MeasureTables*



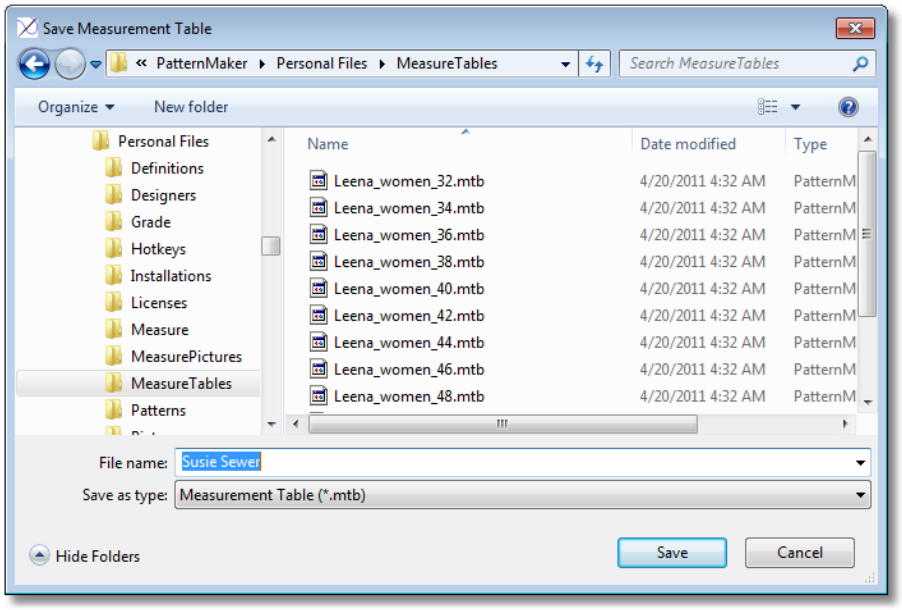
- Open the sample measurement file called *Leena_default_women.mmt:*



- Enter your name and replace the default numbers with your own:



- Save the new table with your name:



See also:

Using Measurement Tables

8.2 MACRO command

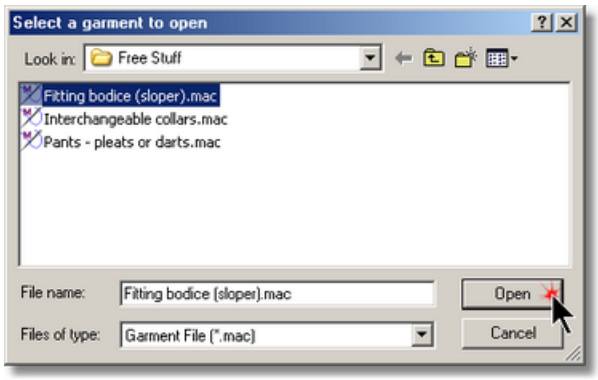
The MACRO command runs a macro. Macros are small programs that run inside PatternMaker to create basic blocks or complete patterns.

Before you run a macro, set up a personal measurement table

Procedure:

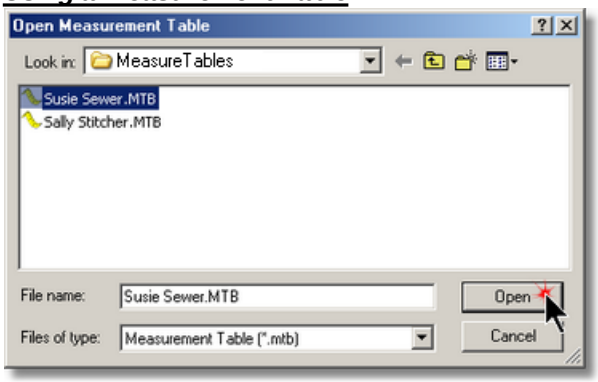
1. Click on the Macro icon, or click "Macro" on the **File** menu.
2. A dialog box will ask you to select a file. Each macro is a file with a name ending in "**.MAC**", such as Pants. mac. The name of each macro file is given, along with the descriptions of the macros, in the separate

instructions that accompany the macro collection. Select the macro you want to run and click the "OK" button. It may take a few seconds for PatternMaker to load the macro.



3. You will now see a series of dialog boxes which ask questions and offer choices. The choices are different for each macro. (For instance, for the womens dress, you will be asked if you want a sleeveless dress or one with sleeves.) To continue through the macro, use your mouse to click on one of the options. If you click "Cancel" the macro will abort and you will be returned to the drawing screen.
4. After you have made your choices, it's time to enter your measurements. You can either use a saved measurement table, or you can enter the measurements manually.

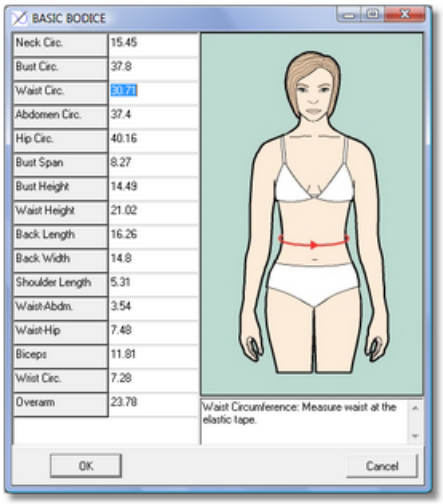
Using a Measurement Table



From the "Open File" dialog box, select a measurement table and click the "Open" button. The measurements from this table will be "plugged into" the macro.

NOTE: You will see only those measurement tables are shown who can be connected to this macro. When you do not see a measurement table be sure that you have saved one of this designer.

Entering Measurements Manually



The macro will prompt you to select a measurement table, but if you do not want to use one, click the "Skip" button to close the "Open File" dialog box. The macro will then display a dialog box into which you can enter your measurements. Some macros may have two dialog boxes for measurements. Fill these in from your *measurement chart*. Remember to use decimal numbers, so 8-3/4 inches is 8.75 inches and so forth. (Use the Fraction Conversion Chart for help.) Be careful to enter the right numbers in the right spaces. When you are ready, click OK or press the <ENTER> key.

5. While the macro is running, the mouse pointer icon turns into an hourglass. You may have to wait for the macro to run, especially if you do not have a fast computer, or if the macro you are using is particularly complicated. You will know the macro is done when the hourglass cursor changes back to an arrow and the prompt `Command:` appears on the status bar.

IF YOU CANNOT SEE THE PATTERN PIECES, OR IF YOU ONLY SEE PART OF THEM, PRESS THE <END> KEY TO VIEW ALL THE PIECES IN THE DRAWING.

The macro will draw your new pattern in the drawing area. If there is a drawing on the screen when you run a macro, the macro will be *added to* what is on the screen. It may overlap existing pattern pieces. If this happens you can use the MOVE command to move things around. Use the ZOOM and PAN commands to view different parts of the drawing.

A macro can be run as many times as you wish. With the Deluxe Editor or higher, you can reuse your own measurement table, and you can create new tables for many different people.

Once the macro has created the pattern on the screen, the drawing can be saved as a **.PAT** file, to be opened and printed again later. With the Deluxe Editor or higher, you can also edit the .PAT file, but you cannot automatically change the body measurements used in the garment. To change the measurements, run the macro again.

8.3 Save a pattern file

The SAVE AS command saves the current drawing with a new file name, while leaving the current file unchanged. Use this to save your new work without erasing your old work.

Procedure:

1. Select "Save As" from the **File** menu. The Save File dialog box appears.
2. If necessary, navigate to the location where you want the file to be saved.
3. Type a name for your file, or select a file from the list. If the filename you select or type already exists, that file will be overwritten. If you type a new name, a new file is created.
4. PatternMaker automatically adds the "**.PAT**" extension. If you want to save in a different format, for example **.DXF**, click the "Save as Type" drop-down box, and select the file type from the list.

5. Click the "Save" button.

See also:

SAVE command

DXF Import/Export

8.4 OPEN command

The OPEN command opens an existing drawing (a **.PAT** file) which has been saved on disk. Opening a new file replaces whatever is on the screen. If there is a drawing open, the program will ask you if it should be saved.

Procedure:

1. Click the Open icon, or select "Open" from the **File** menu. The Open File dialog box appears.
2. If necessary, navigate to the location of the file you want to open.
3. By default, **.PAT** files (PatternMaker format) are displayed. If you want to open a different format, for example **.DXF**, click the "Files of Type" drop-down box and select the file type from the list (see picture).
4. Select the file you want to open.
5. Click the "Open" button.

You can open a PatternMaker Backup file (.BAK) through the OPEN command.
This is useful if you've made a major mistake in your drawing that the UNDO command cannot fix, and you need to go back to a previous version of your file.

See also:

DXF Import/Export

Troubleshooting & Support

9.1 Frequently-asked questions

Where do the macros come from?

There are many talented and creative people around the world creating macros! The original collections were produced by a Finnish designer, Leena Lähteenmäki. She created patterns for basic, classic garments. Other designers are now producing macros for Renaissance costumes, wedding gowns, and many other applications.

PatternMaker Software publishes another program called MacroGenerator which helps designers to create the macros without requiring knowledge of computer programming. For information about MacroGen, please go to the PatternMaker website.

Can I create my own macros?

If you have PatternMaker Professional Studio or higher for drawing the patterns for your macro and you have the unique program **Project Editor.** With **Project Editor** you can create simple macros for patterns that adjust only in two dimensions(standard sizes) -- for example, an unusual pillow design, or a pattern for a hat.

If you want to create patterns that will adjust in three dimensions -- almost any type of clothing -- you can use a program called MacroGenerator, also from PatternMaker Software. Click here for more information about MacroGen.

Can I adjust the body measurements after a pattern is on the screen?

No. Once the pattern is drawn, it is defined as a specific size. To change the measurements, re-run the pattern.

To see more **Frequently Asked Questions** look also at our website the FAQ chapter/Knowledge Base

9.2 Identifying and solving problems

None of the drawing or editing commands work

1. Make sure you're not in the middle of some other command (check the status bar).
2. Make sure the program version you are using is supposed to offer drawing and editing commands.

I've purchased the program, but it tells me I only have XX number of days to use it

If you see this message after you've purchased the Deluxe Editor or higher, it means you haven't registered the program yet. Go to the "Registration" form on the Settings menu and follow the directions there. (See Registering PatternMaker for more details.)

I can't install a macro collection

All the macro collections require a password to install them. You receive the password when you order, either in an e-mail, if you order by download, or on the macro package if you order through the mail. *After the collection is installed, **be sure to write down the password**, since you will need it to install future macro updates.*

The lines on the printed pattern are too light

Set your printer to its lowest resolution. Lower resolution means fewer dots per inch; fewer dots per inch means each dot is larger. When PatternMaker prints something, it prints each line "one dot" wide. Therefore, if the printer is printing larger dots, the pattern lines are thicker/darker. See Configure: LINE WIDTH

I can't make this command work

Every command has detailed step-by-step instructions in the Reference section of the Help file.

It takes a long time to open the file browser when I want to start with a saved pattern

We've seen this happen if you have a lot of files loose in your user directory. If you can organize the files into folders, you should find that the file browser opens more quickly.

When I maximize the screen the drawing refresh after every step!
The solution is to change the screen settings of PatternMaker. Click Right Mouse at the PM icon at the desktop.
Select Properties.
Run: Change it to Normal screen
It will give no refreshing the screen anymore.

At our website in the Frequently Asked Questions chapter we have more trouble shooting answers.
See the **FAQ chapter/Knowledge Base**

9.3 Getting Help

There are several avenues available to you if you need help.

1. First, check the Help file. It has been expanded to make it easier to find what you need. You can access the Help file from the Help menu, or by typing ?
2. Next, check the Index of the User's Manual, and the Index of the Tutorial. You may be able to find a reference to something you didn't notice in the Help file.
3. If it's a piece of terminology that's puzzling you, check the Glossary.
4. Finally, you can contact technical support by e-mail, at support@patternmakerusa.com. Also consider joining the PatternMaker User's Group e-mail discussion list. Check the PatternMaker web site for instructions on how to join:

   www.patternmakerusa.com

   You can use the link in the "About" box (located on the Help menu) to automatically launch your browser and go directly to our site.
5. As long as you're there, check the online Knowledge Base for an answer to your question. We've posted answers to many frequently asked questions, and you may find what you need in that reference.

9.4 Glossary

absolute mode

One of two modes available when using a *digitizer tablet*. In this mode, the digitizer tells the program where the cursor is. The other mode is *mouse mode*.

arc

A curved line segment.
An arc has three *vertices* – one at each end, and a "control point" which acts like a magnet to control the shape of the curve.

armscye

Armhole

click

Press the left mouse button (**LM**) one time and release it.

command line

The blue area at the bottom of the PatternMaker window which displays command information.

coordinates

A system used to indicate position on a grid. The grid can measure units either in inches or in centimeters. The X coordinate counts units in a horizontal direction, and the Y coordinate counts units in a vertical direction.

digitizer (digitizer tablet)

A computer accessory used to draw or trace lines and shapes and communicate that information to the computer. Digitizers can range from the size of a notepad to the size of a kitchen table.

dimension (Dim)

One of four types of *objects* in PatternMaker. Dimension objects are used to measure straight-line distances between points.

double-click

Press and release the left mouse button (**LM**) two times, quickly.

drop-down menu

A sub-menu that appears ("drops down") when you click on an item in the *menu bar*.

grading

After you've drafted a pattern in one size, grading is the process of defining "rules" that tell the program how to move certain points of the pattern to create larger and smaller sizes.

group

n. two or more objects which actions are performed upon as if they were one unit.

v. to select two or more objects and tell the program to consider them as one unit.

icons

Small pictures that represent commands. Click on an icon to activate the corresponding command.

insertion point

The location on a *symbol* (one of its *vertices)* where you click to select it, or where you click in the drawing to position the symbol.

interpolate

To make an estimation based on surrounding information. A grading arrow can be interpolated by using the values of the arrows on either side of it.

library

A collection of *symbols*, named *objects*, or named *groups* from which you can select and insert into your drawing. Any **.PAT** file can be a library, as long as it contains at least one of these items.

macro

A small add-on program (a pattern collection)that is run by PatternMaker to automatically draw pre-designed garments according to a user's measurements.

master measurement template (MMT)

A measurement "template" provided by the macro designer which indicates the measurements that need to be taken. A *personal measurement table* is created from the master measurement template file (.MMT).

measurement table (MTB)

A list of a user's custom measurements. A measurement table is specific to a particular designer's macros (pattern collections).

menu bar

The line of words along the top of the PatternMaker window which contains all the program commands.

mouse mode

One of two modes available when using a *digitizer tablet*. In this mode, the digitizer works like an ordinary mouse. The other mode is *absolute mode*.

object

Something that you draw in PatternMaker. There are four types of Objects: *Polygon, Dim, Text,* and *Symbol.*

origin

The position that the *coordinates* (0, 0) are measured from.

point

1) A *vertex* of an object;
2) a location in the drawing. The meaning should be clear from the context.

polar coordinates

A method of describing the location of a *point* using the length of a line and the direction (in degrees) in which it points.

polygon (Poly)

One of four types of *objects* in PatternMaker. Any object that is not a Symbol, Text, or a Dimension object is a Polygon object. Polygons can be open or closed, and can have any number of *vertices*.

radius

The distance from the center of a circle to its edge

scale (digitizers)

The ratio between the size of the object to be digitized and the size you want the object to be in your drawing. A scale of "4" means that 1 inch on the digitized object equals 4 inches in your drawing. In other words, this object is 1/4 size.

segment

A section of an object between two adjacent *vertices*.

status bar

The area of the PatternMaker window under the *menu bar*. This area shows the current drawing color, fill pattern, line type and other settings, and also the current mouse position and the current command.

symbol

One of four types of *objects* in PatternMaker. Symbols consist of one or more objects grouped together with a single *insertion point*. The single insertion point allows you to add several objects to your drawing in a single step. Symbols can include such things as grainlines, buttonholes, or copyright information.

tangent

A line that continues a segment of a *polygon* in the direction of the last segment.

text

One of four types of *objects* in PatternMaker. Text is used to insert labels on pattern pieces or add descriptive information.

vertex (vertices - pl.)

The beginning/end of a line *segment*, or the place where two line segments come together.
For example, a triangle has three vertices, one at each corner.

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